Jan

Access DB# 85634

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Ganapathy Krishnan Examiner #: 79271 Date: 1/30/03
Art Unit: 1623 Phone Number 305-4837 Serial Number: 10/030974
Mail Box and Bldg/Room Location: 8D08 Results Format Preferred (circle): PAPER DISK E-MAIL
8B19

If more than one search is submitted, please prioritize searches in order of need. mg

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Preparations containing no cross-linking reagents.

Inventors (please provide full names): Andrea Heilemann, Josef Holzer, Andreas Sander, Gisbert Schaefer.

Earliest Priority Filing Date: _____

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please search for:

1. A process for preparing a composition containing chitosan without cross-linkers (claims 19 and 31).
   claim 20–30 and 32–38 have limitations.

Jan Delaval
Reference Librarian
Biotechnology & Chemical Library
CM1 1E07 – 703-308-4498
jan.delaval@uspto.gov

****

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Date Searcher Picked Up: 2/3/03
Date Completed: 2/3/03
Searcher Prep & Review Time: _____
Clerical Prep Time: 60
Online Time: +120

Type of Search

NA Sequence (#) _____
AA Sequence (#) _____
Structure (#) ✓
Bibliographic _____
Litigation _____
Fulltext _____
Patent Family _____
Other _____

Vendors and cost where applicable

STN ✓
Dialog _____
Questel/Orbit _____
Dr.Link _____
Lexis/Nexis _____
Sequence Systems _____
WWW/Internet _____
Other (specify) _____

PTO-1590 (8-01)

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FILE COVERS 1907 - 3 Feb 2003 VOL 138 ISS 6
FILE LAST UPDATED: 2 Feb 2003 (20030202/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l79 all hitstr tot

L79 ANSWER 1 OF 17 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:668185 HCAPLUS
DN 135:231485
TI Cosmetic compositions containing styling polymers, hair-care method, and use of the compositions
IN Belli, Emmanuelle; Sheldon, Elvet; Pasquet, Dorothee
PA L'oreal S. A., Fr.
SO Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM A61K007-06
ICS C08K003-00; C08L003-00; C08L005-00; C08L033-02; C08L101-02
CC 62-3 (Essential Oils and Cosmetics)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001247434	A2	20010911	JP 2001-62335	20010306
	FR 2805990	A1	20010914	FR 2000-2907	20000307
	CN 1314137	A	20010926	CN 2001-116230	20010228
	EP 1132076	A1	20010912	EP 2001-400554	20010302
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CA 2337289	AA	20010907	CA 2001-2337289	20010305
	BR 2001000968	A	20011030	BR 2001-968	20010306
	US 2001055580	A1	20011227	US 2001-799911	20010307
	US 20020176836	A9	20021128		
PRAI	FR 2000-2907	A	20000307		

AB The compns., which are applied to skin, nail, lips, hair, eyebrows, and eyelashes, not sticky to fingers and esp. useful as styling agents for **dried** hair, contain (a) thickeners selected from xanthan gum, scleroglucan gum, gellan gum, rhamsan gum, alginate, maltodextrin, starch, starch derivs., Indian gum, carob bean powder, guar gum, guar gum derivs., **crosslinked** copolymers of acrylic acid and/or methacrylic acid, **crosslinked** thickening polyacrylamide, and assocg. polymers having .gtoreq.1 hydrophilic unit and .gtoreq.1 fatty chain, (b) **noncrosslinked** setting polymers, and (c) insol. nonlayered compd.

powder. A hair styling gel was prepd. from Carbopol Ultrez 10 [**crosslinked** poly(acrylic acid)] 0.4, Viscophobe DB 1000 1.5, vinyl acetate-vinylpyrrolidone copolymer 3, Belsil DMC 6038 (dimethicone copolyol) 0.5, kaolin 1, EtOH 17.2, aminomethylpropanol, and H2O to 100 parts. The gel was not sticky to fingers and fixed hair style **without** harming the natural appearance.

ST hair styling compn thickener setting polymer powder

IT Polyurethanes, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(block; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Kaolin, biological studies
Soaps
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Polyoxyalkylenes, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(di-Me, Me hydrogen polysiloxane-, Mirasil; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Polysiloxanes, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(di-Me, Me hydrogen, polyoxyalkylene-, Mirasil; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Microspheres
(expanded; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Polyurethanes, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(insol.; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Polysiloxanes, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(microbeads; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Polysiloxanes, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(polyether-, Belsil DMC 6038; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Polyamines
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(polyoxazolines; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Polysiloxanes, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(polyoxyalkylene-; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Polyoxyalkylenes, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(polysiloxane-; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Ceratonia siliqua
(powder; cosmetic compns. contg. thickeners, setting polymer, and

powdery compds.)

IT Polyamides, biological studies
Polyesters, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(powder; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Polyethers, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(siloxane-, Belsil DMC 6038; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Bone morphogenetic protein receptors
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(type II; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT 53633-54-8, Polyquaternium 11
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(Gafquat; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT 84563-77-9, **Chitosan** glycolate
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(Kytamer; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT 75-21-8D, Oxirane, polymers with di-Me siloxanes, biological studies 75-56-9D, Methyloxirane, polymers with di-Me siloxanes 79-10-7D, Acrylic acid, alkyl esters, homopolymers 79-41-4D, Methacrylic acid, alkyl esters, homopolymers 88-12-0D, polymers with dialkylaminoalkyl (meth)acrylates 108-05-4D, Vinyl acetate, polymers with acrylic esters or maleate esters **471-34-1**, Calcium carbonate, biological studies **546-93-0**, Magnesium carbonate **1306-06-5**, Hydroxyapatite 1306-38-3, Ceria, biological studies 1314-13-2, Zinc oxide, biological studies 1314-23-4, Zirconia, biological studies 1344-28-1, Alumina, biological studies 2090-64-4 9000-28-6, Gum ghatti 9000-30-0, Guar gum 9002-88-4, Acumist B6 9003-20-7, Poly(vinyl acetate) 9003-39-8, PVP 9004-34-6D, Cellulose, cationic, biological studies 9004-64-2, Klucel EF 9005-00-9, Brij 78 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid 9006-26-2, Ethylene-maleic anhydride copolymer **9012-76-4**, **Chitosan** 9050-36-6, Maltodextrin 11138-66-2, Xanthan gum 13463-67-7, Titania, biological studies 24937-16-4, Orgasol 2002 24937-78-8, Ethylene-vinyl acetate copolymer 25038-74-8 25085-35-2, Acrylic acid-ethyl acrylate copolymer 26006-22-4 26100-47-0, Acrylamide-ammonium acrylate copolymer 27119-07-9, 2-Acrylamido-2-methylpropanesulfonic acid homopolymer 29297-55-0D, Vinylimidazole-vinylpyrrolidone copolymer, quaternized 30581-59-0, Copolymer 845 35429-19-7, Acrylamide-methacryloyloxyethyltrimethylammonium chloride copolymer 37311-01-6, Procetyl AWS 39421-75-5, Jaguar HP 105 39464-87-4, Scleroglucan 40623-73-2, Acrylamide-2-acrylamido-2-methylpropanesulfonic acid copolymer 71010-52-1, Gellan gum 76050-42-5, SynthalenK 96949-21-2, Rhamsan gum 102972-64-5, Dimethylaminoethyl methacrylate-vinylcaprolactam-vinylpyrrolidone copolymer 117522-93-7, Kytamer PC 132230-28-5D, quaternized 145686-74-4, Laurylmethicone copolyol 194674-18-5, Simulsol 165 195739-91-4, Carbopol Ultrez 10 330627-33-3, Viscophobe DB 1000 359715-28-9, MSX 4562
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

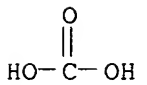
IT 9010-76-8, Expancel 551DE

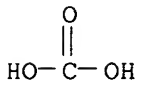
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(microballoons; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT 9003-53-6, Polystyrene 24937-14-2, Poly(.beta.-alanine) 25513-34-2, Poly(.beta.-alanine)
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(powder; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

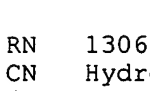
IT **471-34-1**, Calcium carbonate, biological studies **546-93-0**, Magnesium carbonate **1306-06-5**, Hydroxyapatite **9012-76-4, Chitosan**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

RN 471-34-1 HCAPLUS
CN Carbonic acid calcium salt (1:1) (8CI, 9CI) (CA INDEX NAME)





RN 546-93-0 HCAPLUS
CN Carbonic acid, magnesium salt (1:1) (8CI, 9CI) (CA INDEX NAME)



RN 1306-06-5 HCAPLUS
CN Hydroxylapatite (Ca5(OH)(PO4)3) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	1	14280-30-9
O4P	3	14265-44-2
Ca	5	7440-70-2

RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 2 OF 17 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:50727 HCAPLUS
DN 134:102471
TI **Chitosan** preparations **free** from **crosslinking** agents

IN **Schafer, Gisbert; Holzer, Josef; Sander, Andreas; Heilemann, Andrea**
PA **Cognis Deutschland G.m.b.H., Germany**
SO PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM C08L005-08
ICS C08B037-08; A61K007-00; A61K047-36; A61K031-722; A23L001-056; A61L015-28
CC 44-5 (Industrial Carbohydrates)
Section cross-reference(s): 17, 62, 63
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001004207	A1	20010118	WO 2000-EP6162	20000701
W: JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19932075	A1	20010118	DE 1999-19932075	19990712
EP 1198508	A1	20020424	EP 2000-943964	20000701
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
PRAI DE 1999-19932075	A	19990712		
WO 2000-EP6162	W	20000701		

WPO & instant

AB The title prepns., useful in food, cosmetics, and pharmaceuticals (no data), are prepd. by treating aq. solns. or homogeneous suspensions of **chitosan** with precipitants and dewatering. A colloidal suspension of **chitosan** (Hydagen CMFP) 2, H2O 98, and L-lactic acid 0.346 g was mixed (9 kg) at 10.degree. with 360 g 8.05% **NaHCO3** for 2 min, poured into molds, left for 3 h, **frozen**, and **freeze -dried** at 80.degree./1 mbar to give blocks which were cut to desired dimensions (e.g., 200 .times. 300 .times. 1.5 mm).

ST **chitosan** prepn **crosslinker free**; food **chitosan** prepn; cosmetic **chitosan** prepn; pharmaceutical **chitosan** prepn; precipitant **chitosan** prepn; **sodium bicarbonate** precipitant **chitosan**

IT Cosmetics
(**chitosan** prepns. **free** from **crosslinking** agents for use in cosmetics)

IT Food
(**chitosan** prepns. **free** from **crosslinking** agents for use in food)

IT Drugs
(**chitosan** prepns. **free** from **crosslinking** agents for use in pharmaceuticals)

IT **Phosphates, processes**
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(**hydrogen**; precipitants for **chitosan** prepns. **free** from **crosslinking** agents)

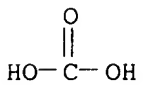
IT **Bases, processes**
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(**org.-N**; precipitants for **chitosan** prepns. **free** from **crosslinking** agents)

IT **Alkali metal hydroxides**
Alkaline earth hydroxides
Carbonates, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(precipitants for **chitosan** prepns. **free** from **crosslinking** agents)

IT **9012-76-4, Chitosan**
RL: **TEM (Technical or engineered material use)**; USES (Uses)
(**chitosan** prepns. **free** from **crosslinking**

agents)
IT **144-55-8, Sodium bicarbonate**, processes
7664-41-7, Ammonia, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(precipitants for **chitosan** prepns. **free** from **crosslinking** agents)
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Higeta Shoyu Kk; JP 63017901 A 1988 HCAPLUS
(2) Kawamura; US 4833237 A 1989 HCAPLUS
(3) Nippon Suisan Kaisha Ltd; JP 01062302 A 1989 HCAPLUS
(4) Nippon Suisan Kaisha Ltd; JP 01062302 A 1989 HCAPLUS
(5) Nippon Suisan Kaisha Ltd; PATENT ABSTRACTS OF JAPAN 1989, V013(260), PC-607
(6) Unikita Ltd; JP 63090507 A 1988 HCAPLUS
IT **9012-76-4, Chitosan**
RL: **TEM (Technical or engineered material use)**; USES (Uses)
(**chitosan** prepns. **free** from **crosslinking** agents)
RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **144-55-8, Sodium bicarbonate**, processes
7664-41-7, Ammonia, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(precipitants for **chitosan** prepns. **free** from **crosslinking** agents)
RN 144-55-8 HCAPLUS
CN Carbonic acid monosodium salt (8CI, 9CI) (CA INDEX NAME)



RN 7664-41-7 HCAPLUS
CN Ammonia (8CI, 9CI) (CA INDEX NAME)

L79 ANSWER 3 OF 17 HCAPLUS COPYRIGHT 2003 ACS
AN **2000:900474** HCAPLUS
DN **134:46867**
TI Hemoactive compositions and methods for their manufacture and use
IN Reich, Cary J.; Osawa, A. Edward; Tran, Helen
PA Fusion Medical Technologies, Inc., USA
SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K038-00
ICS A61K038-17; A61K035-14; A61K031-74; A61K009-00; A01N043-04; C07K001-00
CC 63-8 (Pharmaceuticals)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000076533	A1	20001221	WO 2000-US15998	20000609 <--
	W: JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 2002042378	A1	20020411	US 1999-330315	19990610 <--
	EP 1185288	A1	20020313	EP 2000-942742	20000609 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2003501215	T2	20030114	JP 2001-502866	20000609 <--
PRAI	US 1999-330315	A	19990610 <--		
	WO 2000-US15998	W	20000609 <--		

AB **Dried** hemoactive materials comprise both a **crosslinked** biol. compatible polymer and a **non-crosslinked** biol. compatible polymer. The **crosslinked** polymer is selected to form a hydrogel when exposed to blood. The **non-crosslinked** polymer is chosen to solubilize relatively rapidly when exposed to blood. The **non-crosslinked** polymer serves as a binder for holding the materials in desired geometries, such as sheets, pellets, plugs, or the like. Usually, the **crosslinked** polymer will be present in a particulate or fragmented form. The materials are particularly suitable for hemostasis and drug delivery. Examples are given for prodn. of **uncrosslinked** gelatin powder, prodn. of lyophilized composite mixt. of **crosslinked** and **uncrosslinked** biopolymer in sheet form, and used of lyophilized composite material as a hemostatic.

ST hemostatic **crosslinked** biopolymer; gelatin hemoactive

IT Anesthetics
Angiogenesis inhibitors
Anti-inflammatory agents
Antibacterial agents
Antibiotics
Antitumor agents
Antiviral agents
Crosslinking
Hemostatics
Plasticizers
Wound healing promoters
(hemoactive compns.)

IT Acrylic polymers, biological studies
Caseins, biological studies
Collagens, biological studies
Elastins
Fibrinogens
Fibrins
Fibronectins
Gelatins, biological studies
Glycosaminoglycans, biological studies
Hemoglobins
Keratins
Laminins
Polyesters, biological studies
Polyoxyalkylenes, biological studies
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(hemoactive compns.)

IT Enzymes, biological studies
Hormones, animal, biological studies
Neurotransmitters
Polysaccharides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hemoactive compns.)

IT Vinyl compounds, biological studies
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(polymers; hemoactive compns.)
IT Albumins, biological studies
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(serum; hemoactive compns.)
IT 25322-68-3, Peg
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(hemoactive compns.)
IT 50-70-4, Sorbitol, biological studies 56-81-5, Glycerol, biological studies 9003-05-8, Polyacrylamide 9004-34-6, Cellulose, biological studies 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid 9012-36-6, Agarose **9012-76-4, Chitosan** 9014-63-5, Xylan 9034-32-6, Hemicellulose 24980-41-4, Polycaprolactone 25248-42-4, Polycaprolactone 26780-50-7, Glycolide-lactide copolymer
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hemoactive compns.)
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Chu; US 5428024 A 1995 HCAPLUS
(2) Fusion Medical Technologies Inc; WO 9808550 A1 1998 HCAPLUS
(3) Wallace; US 6066325 A 2000 HCAPLUS
IT **9012-76-4, Chitosan**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hemoactive compns.)
RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 4 OF 17 HCAPLUS COPYRIGHT 2003 ACS
AN 2000:814525 HCAPLUS
DN 133:363926
TI Collagen-free compositions for cosmetics
IN Wachter, Rolf; Griesbach, Ute; Horlacher, Peter
PA **Cognis Deutschland G.m.b.H., Germany**
SO PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM C08B037-00
ICS C08L005-08; A61K007-48
CC 44-5 (Industrial **Carbohydrates**)
Section cross-reference(s): 62
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2000068273	A1	20001116	WO 2000-EP3762	20000426	<--
	W: AU, CA, CN, JP, KR, NZ, US					
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
	DE 19920557	A1	20001116	DE 1999-19920557	19990505	<--
	EP 1173488	A1	20020123	EP 2000-927067	20000426	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
	JP 2002544140	T2	20021224	JP 2000-616245	20000426	<--
PRAI	DE 1999-19920557	A	19990505	<--		
	WO 2000-EP3762	W	20000426	<--		

OS MARPAT 133:363926
AB The invention relates to collagen-**free** cosmetic prepns. which

can be obtained by **crosslinking** and subsequently dewatering swollen aq. suspensions of **chitosans** and .beta.-1,3-glucans with diisocyanates and/or dialdehydes. In examples, compns. of **chitosan** (Hydagen CMFP), Highcareen GS, and glycerol were **crosslinked** with hexamethylene diisocyanate to give a spongy material after **freeze drying**.

ST **chitosan** isocyanate glucan glycerol polymer cosmetic

IT Cosmetics
(**chitosan**-based collagen-free compns. for)

IT **Drying**
(dewatering; of **chitosan**-based collagen-free compns. for cosmetics)

IT **Freeze drying**
(of **chitosan**-based collagen-free compns. for cosmetics)

IT 306975-95-1P, Glycerol-hexamethylene diisocyanate-Highcareen GS-Hydagen CMFP copolymer
RL: BSU (Biological study, unclassified); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation)
(in collagen-free compns. for cosmetics)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L79 ANSWER 5 OF 17 HCAPLUS COPYRIGHT 2003 ACS

AN 2000:450025 HCAPLUS

DN 133:366262

TI Antifungal activity and release behavior of **crosslinked** **chitosan** films incorporated with chlorhexidine gluconate

AU Ikinci, G.; Senel, S.; Kas, S.; Yousefi-Rad, A.; Hincal, A. A.

CS Department of Pharmaceutical Technology, University of Hacettepe, Ankara, Turk.

SO Advances in Chitin Science (2000), 4(EUCHIS'99), 287-290
CODEN: ACSCFF

PB Universitaet Potsdam, Universitaetsbibliothek

DT Journal

LA English

CC 63-5 (Pharmaceuticals)

AB **Free** and **crosslinked chitosan** films were prepd. by solvent casting method. Chlorhexidine gluconate (Chx) which is an effective therapeutic agent for oral candidiasis was chosen as the candidate drug. The films were characterized by detn. of water absorption capacity, drug release and antifungal activity. Water absorption capacity and the release of drug from the films decreased with increasing **crosslinking** agent, tripolyphosphate concn. The release of Chx from **chitosan** films was maintained for 4h reaching a plateau after 1.5h **without** a lag-time. The antifungal activity of Chx incorporated into **chitosan** film was found to be more pronounced when compared to that of Chx itself.

ST antifungal chlorhexidine release **chitosan** film

IT **Crosslinking** agents
Dissolution rate
Fungicides
(antifungal activity and release behavior of **crosslinked** **chitosan** films incorporated with chlorhexidine gluconate)

IT Drug delivery systems

(films; antifungal activity and release behavior of **crosslinked chitosan** films incorporated with chlorhexidine gluconate)

IT 18472-51-0, Chlorhexidine gluconate
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antifungal activity and release behavior of **crosslinked chitosan** films incorporated with chlorhexidine gluconate)

IT **14127-68-5**, Tripolyphosphate
RL: CAT (Catalyst use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antifungal activity and release behavior of **crosslinked chitosan** films incorporated with chlorhexidine gluconate)

IT **9012-76-4, Chitosan**
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antifungal activity and release behavior of **crosslinked chitosan** films incorporated with chlorhexidine gluconate)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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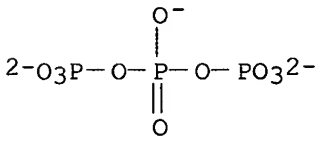
(5) Senel, S; Proceed Int Symp Control Rel Bioact Mater 1998, V25, P790

IT **14127-68-5**, Tripolyphosphate
RL: CAT (Catalyst use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antifungal activity and release behavior of **crosslinked chitosan** films incorporated with chlorhexidine gluconate)

RN 14127-68-5 HCAPLUS
CN Triphosphate (8CI, 9CI) (CA INDEX NAME)



IT **9012-76-4, Chitosan**
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antifungal activity and release behavior of **crosslinked chitosan** films incorporated with chlorhexidine gluconate)

RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 6 OF 17 HCAPLUS COPYRIGHT 2003 ACS
AN **1999:620323** HCAPLUS
DN **132:6307**
TI **Chitosan** microspheres prepared by spray **drying**
AU He, P.; Davis, S. S.; Illum, L.
CS Department of Pharmaceutical Sciences, University of Nottingham, University Park, Nottingham, UK
SO International Journal of Pharmaceutics (**1999**), 187(1), 53-65
CODEN: IJPHDE; ISSN: 0378-5173
PB Elsevier Science B.V.
DT Journal
LA English

CC 63-6 (Pharmaceuticals)
AB **Non-crosslinked** and **crosslinked** **chitosan** microspheres were prepd. by a spray **drying** method. The microspheres so prepd. had a good sphericity and a smooth but distorted surface morphol. They were pos. charged. The particle size ranged from 2 to 10 .mu.m. The size and zeta potential of the particles were influenced by the **crosslinking** level. With decreasing amt. of **crosslinking** agent (either glutaraldehyde or formaldehyde), both particle size and zeta potential were increased. Prepn. conditions also had some influence on the particle size. DSC studies revealed that cimetidine, as well as famotidine was molecularly dispersed inside the microspheres, in the form of a solid soln. The release of model drugs (cimetidine, famotidine and nizatidine) from these microspheres was fast, and accompanied by a burst effect.
ST **chitosan** microsphere spray **drying**
IT Antihistamines
(H2; **chitosan** microspheres prepd. by spray **drying**)
IT **Crosslinking**
Dissolution rate
Particle size distribution
Zeta potential
(**chitosan** microspheres prepd. by spray **drying**)
IT Drug delivery systems
(microspheres; **chitosan** microspheres prepd. by spray **drying**)
IT **Drying**
(spray; **chitosan** microspheres prepd. by spray **drying**)
IT 50-00-0, Formaldehyde, processes 111-30-8, Glutaraldehyde
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(**chitosan** microspheres prepd. by spray **drying**)
IT **9012-76-4, Chitosan** 51481-61-9, Cimetidine
76824-35-6, Famotidine 76963-41-2, Nizatidine
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**chitosan** microspheres prepd. by spray **drying**)
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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IT **9012-76-4, Chitosan**
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**chitosan** microspheres prepd. by spray **drying**)
RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 7 OF 17 HCAPLUS COPYRIGHT 2003 ACS
AN **1999:440742** HCAPLUS
DN **131:215588**
TI Preparing chito-oligosaccharides as antimicrobial agents for cotton
AU Seong, Ha-Soo; Kim, Jae-Pil; Ko, Sohk-Won
CS Department of Fiber and Polymer Science, Seoul National University, Seoul, S. Korea
SO Textile Research Journal (1999), 69(7), 483-488
CODEN: TRJOA9; ISSN: 0040-5175
PB Textile Research Institute
DT Journal
LA English
CC 40-9 (Textiles and Fibers)
Section cross-reference(s): 44
AB Cotton fabric with good antimicrobial activity and durability to washing is obtained by using chito-oligosaccharides **without** the need for a binding chem. as a **crosslinker**. The fully deacetylated **chitosan** is depolymd. into chito-oligosaccharide using sodium nitrite. The av. d.p. (DP) of chito-oligosaccharide is detd. by colorimetric titrn. of a terminal aldehyde group of chito-oligosaccharide. In a pad-**dry**-cure process, two different chito-oligosaccharides (DP = 3 and 10) are applied to cotton fabric using the chem. reactivity of the terminal aldehyde group. The antimicrobial activity and durability to washing of the treated cotton are evaluated. The results show that at the fiftieth wash cycle, the cotton fabrics treated with 2.4% chito-oligosaccharide are able to maintain 95% (for a DP of 3) and 100% (for a DP of 10) bacterial redns.
ST **chitosan** oligosaccharide cotton fabric antimicrobial agent
IT Textiles
(cotton; prepn. of chito-oligosaccharides as antimicrobial agents for cotton fabrics)
IT Antimicrobial agents
Depolymerization
(prepn. of chito-oligosaccharides as antimicrobial agents for cotton fabrics)
IT **9012-76-4, Chitosan**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(depolymd.; prepn. of chito-oligosaccharides as antimicrobial agents for cotton fabrics)
IT 7632-00-0, Sodium nitrite
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of chito-oligosaccharides as antimicrobial agents for cotton fabrics)
RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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(10) Tsuji, A; Chem Pharm Bull 1969, V17(1), P217 HCAPLUS
(11) Vigo, T; Handbook of Fiber Science and Technology: Vol II Chemical Processing of Fibers and Fibrics Functional Finishes Part A 1983, P367

IT **9012-76-4, Chitosan**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(depolymd.; prepn. of chito-oligosaccharides as antimicrobial agents for cotton fabrics)
RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 8 OF 17 HCAPLUS COPYRIGHT 2003 ACS
AN **1999:125735** HCAPLUS
DN **130:187225**
TI **Chitosan** matrixes for encapsulated cells for implantation
IN Aebischer, Patrick; Zielinski, Beth A.
PA Brown University Research Foundation, USA
SO U.S., 10 pp., Cont.-in-part of U.S. Ser. No. 176,323, abandoned.
CODEN: USXXAM
DT Patent
LA English
IC ICM C12N011-10
ICS C12N011-04; C12N005-00
NCL 435178000
CC 63-7 (Pharmaceuticals)
FAN.CNT 2

	PATENT NO.	KIND	DATE		APPLICATION NO.	DATE	
PI	US 5871985	A	19990216		US 1994-294149	19940822	<--
	US 6140089	A	20001031		US 1999-251004	19990216	<--
PRAI	US 1992-952249	B1	19920928	<--			
	US 1994-176323	B2	19940103	<--			
	US 1994-294149	A3	19940822	<--			

AB Vehicles contg. cells for implanting in the tissue of an individual are prepd. having cells dispersed in a particulate, essentially **non cross-linked chitosan** core matrix that is enclosed within a semipermeable membrane. The cells are entrapped between **chitosan** particles of the core matrix and there is essentially no interfacial **crosslinking** between the core matrix and the membrane. The core matrix provides a phys. support for viable cells within the vehicle such that the cells are evenly dispersed throughout the core matrix so as to allow their maintenance, growth, proliferation and differentiation. The vehicle can be prepd. by mixing viable cells with a soln. of **chitosan**, encapsulating the resultant mixt. in a semipermeable membrane and causing the **chitosan** to ppt. such as by changing the pH to form the core matrix. Alternatively, the **chitosan** is pptd. to form the core matrix contg. cells and then the core matrix is encapsulated in a semipermeable membrane. Cells within the core matrix may be neurosecretory cell lines, .beta.-cell-derived cells lines, fibroblasts, myocytes and glial cells.

ST pharmaceutical implant **chitosan** matrix animal cell

IT Animal cell line
(NIT; **chitosan** matrixes for encapsulated cells for implantation)

IT Animal cell line
(PC12; **chitosan** matrixes for encapsulated cells for implantation)

IT Animal cell line
(RIN; **chitosan** matrixes for encapsulated cells for

implantation)
IT Astrocyte
Fibroblast
Neuroglia
(**chitosan** matrixes for encapsulated cells for implantation)
IT Muscle
(fiber; **chitosan** matrixes for encapsulated cells for implantation)
IT Drug delivery systems
(implants; **chitosan** matrixes for encapsulated cells for implantation)
IT Animal cell line
(.beta.-cell-derived; **chitosan** matrixes for encapsulated cells for implantation)
IT **9012-76-4, Chitosan**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**chitosan** matrixes for encapsulated cells for implantation)
RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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(8) Jarvis; US 4803168 1989
(9) Malette; US 4605623 1986 HCAPLUS
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(15) Rha; US 4744933 1988 HCAPLUS
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IT **9012-76-4, Chitosan**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**chitosan** matrixes for encapsulated cells for implantation)
RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 9 OF 17 HCAPLUS COPYRIGHT 2003 ACS
AN 1998:655488 HCAPLUS
DN 130:100545
TI Investigation of a pMDI system containing **chitosan** microspheres and P134a
AU Williams, Robert O., III; Barron, Melisa K.; Jose Alonso, Maria; Remunan-Lopez, Carmen
CS Pharmaceutics Division, College of Pharmacy, The University of Texas at Austin, Austin, TX, 78712-1074, USA
SO International Journal of Pharmaceutics (1998), 174(1-2), 209-222
CODEN: IJPHDE; ISSN: 0378-5173
PB Elsevier Science B.V.
DT Journal
LA English
CC 63-6 (Pharmaceuticals)
AB Microspheres made of **chitosan**, a biodegradable polymer, were investigated as a potential carrier for therapeutic proteins, peptides and plasmid DNA for administration to the lung from a pressurized metered dose inhaler (pMDI). Through the use of different **crosslinking**

agents and additives, the physicochem. properties of **chitosan**. microspheres were modified to improve compatibility in a pMDI delivery system. Their d., thermal properties, surface hydrophobicity, surface charge and free amino group content were detd. before and after formulation in a pMDI system utilizing P134a. Also, the in vitro delivery characteristics of the pMDI systems were ascertained by cascade impaction. The densities of the **non cross-linked** and the glutaraldehyde **cross-linked chitosan** microspheres closely matched that of liq. P134a. An increase in the median particle size and the polydispersity after exposure to P134a was found for all types of **chitosan** microspheres tested except for those **cross-linked** with glutaraldehyde. This was due to the presence of water in P134a which hydrated and plasticized the **chitosan** microspheres causing aggregation during storage of the pMDI formulations. The change in the mass median aerodynamic diam. (MMAD) of the emitted dose of the pMDI systems reflected the influence of water on the particle size distribution of the **chitosan** microsphere pMDI suspension formulations. The pMDI systems studied produced respirable fractions (%RF) of 18% and multiple detns. of the dose delivery through-the-valve (DDV) of the pMDI systems were consistent. The surface hydrophobicity of the glutaraldehyde **cross-linked chitosan** microspheres was significantly greater than **non crosslinked** or tripolyphosphate (TPP) **crosslinked chitosan** microspheres. The addn. of **aluminum hydroxide** (Al(OH3)) to **non cross-linked chitosan** microspheres did not significantly influence the surface hydrophobicity. A decrease in the free surface amine content and the zeta potential after exposure to P134a was related to hydration and plasticization by water contained in the pMDI formulations. The **non crosslinked** and the glutaraldehyde **crosslinked chitosan** microspheres were found to be potential candidates for carrying biotherapeutic compds. to the lung via a pMDI system due to their compatibility with P134a and their physicochem. characteristics.

ST **chitosan** microsphere inhaler

IT Polymers, biological studies
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(biodegradable; pressurized metered dose inhaler system contg. **chitosan** microspheres and P134a)

IT Drug delivery systems
(inhalants; pressurized metered dose inhaler system contg. **chitosan** microspheres and P134a)

IT Medical goods
(inhalers; pressurized metered dose inhaler system contg. **chitosan** microspheres and P134a)

IT Drug delivery systems
(microspheres; pressurized metered dose inhaler system contg. **chitosan** microspheres and P134a)

IT **Crosslinking**
Particle size
(pressurized metered dose inhaler system contg. **chitosan** microspheres and P134a)

IT 111-30-8, Glutaraldehyde **14127-68-5**, Tripolyphosphate
RL: RCT (Reactant); RACT (Reactant or reagent)
(**crosslinking** agent; pressurized metered dose inhaler system contg. **chitosan** microspheres and P134a)

IT **9012-76-4, Chitosan**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(pressurized metered dose inhaler system contg. **chitosan** microspheres and P134a)

IT 811-97-2, 1,1,1,2-Tetrafluoroethane

RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(propellant; pressurized metered dose inhaler system contg. **chitosan** microspheres and P134a)

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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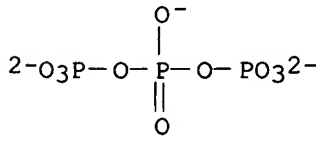
IT **14127-68-5**, Tripolyphosphate
RL: RCT (Reactant); RACT (Reactant or reagent)
(**crosslinking** agent; pressurized metered dose inhaler system contg. **chitosan** microspheres and P134a)

RN 14127-68-5 HCAPLUS

CN Triphosphate (8CI, 9CI) (CA INDEX NAME)



IT **9012-76-4, Chitosan**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(pressurized metered dose inhaler system contg. **chitosan**

microspheres and P134a)
RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 10 OF 17 HCAPLUS COPYRIGHT 2003 ACS
AN 1998:268326 HCAPLUS
DN 128:326334
TI Collagen-**free** cosmetic preparations obtained from **crosslinked chitosan** hydrogels
IN **Heilemann, Andrea; Holzer, Josef**; Horlacher, Peter; **Sander, Andreas**; Wachter, Rolf
PA Henkel Kommanditgesellschaft auf Aktien, Germany; Heilemann, Andrea; Holzer, Josef; Horlacher, Peter; Sander, Andreas; Wachter, Rolf
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM A61K007-48
ICS A61K007-00
CC 62-4 (Essential Oils and Cosmetics)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9817245	A1	19980430	WO 1997-EP5618	19971010 <-- check
	W: JP, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	DE 19643066	A1	19980430	DE 1996-19643066	19961018 <--
	DE 19643066	C2	19990701		
	EP 939617	A1	19990908	EP 1997-912172	19971010 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2001502678	T2	20010227	JP 1998-518906	19971010 <--
PRAI	DE 1996-19643066	A	19961018 <--		
	WO 1997-EP5618	W	19971010 <--		

OS MARPAT 128:326334
AB Collagen-**free** cosmetic prepns., esp. suitable for producing face and hand moisturizing masks, are obtained by **crosslinking** water-swelled aq. suspensions of cationic biopolymers (esp. **chitosan**) with diisocyanates and/or dialdehydes, optionally in conjunction with polyols as plasticizers, and subsequently dehydrating the resulting prepn. Thus, a suspension of 40 g **chitosan** in 1960 g H2O at 40.degree. was adjusted to pH 5.5 with HCl, homogenized with 2 g glycerin, **crosslinked** with 0.8 g hexamethylene diisocyanate, frozen, and lyophilized. The lyophilized block was elastic and water insol., and after rehydration resembled a sponge.
ST cosmetic mask **crosslinked chitosan** hydrogel
IT Glycosides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(alkyl, plasticizers; collagen-**free** cosmetic prepns. obtained from **crosslinked chitosan** hydrogels)
IT **Carbohydrates**, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(amino sugars, plasticizers; collagen-**free** cosmetic prepns. obtained from **crosslinked chitosan** hydrogels)
IT Polyelectrolytes
(cationic; collagen-**free** cosmetic prepns. obtained from **crosslinked chitosan** hydrogels)
IT Biopolymers
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES

(Uses)
(cationic; collagen-**free** cosmetic prepns. obtained from **crosslinked chitosan** hydrogels)
IT **Crosslinking**
Hydrogels
(collagen-**free** cosmetic prepns. obtained from **crosslinked chitosan** hydrogels)
IT Collagens, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(collagen-**free** cosmetic prepns. obtained from **crosslinked chitosan** hydrogels)
IT Dialdehydes
RL: RCT (Reactant); RACT (Reactant or reagent)
(collagen-**free** cosmetic prepns. obtained from **crosslinked chitosan** hydrogels)
IT Isocyanates
RL: RCT (Reactant); RACT (Reactant or reagent)
(di-; collagen-**free** cosmetic prepns. obtained from **crosslinked chitosan** hydrogels)
IT Cosmetics
(face packs; collagen-**free** cosmetic prepns. obtained from **crosslinked chitosan** hydrogels)
IT Alditols
Carbohydrates, biological studies
Glycols, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(plasticizers; collagen-**free** cosmetic prepns. obtained from **crosslinked chitosan** hydrogels)
IT Alcohols, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(polyhydric, plasticizers; collagen-**free** cosmetic prepns. obtained from **crosslinked chitosan** hydrogels)
IT 111-30-8, Glutaraldehyde 822-06-0, Hexamethylene diisocyanate
RL: RCT (Reactant); RACT (Reactant or reagent)
(collagen-**free** cosmetic prepns. obtained from **crosslinked chitosan** hydrogels)
IT **9012-76-4, Chitosan**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(hydrogel; collagen-**free** cosmetic prepns. obtained from **crosslinked chitosan** hydrogels)
IT 56-81-5, Glycerin, biological studies 25618-55-7, Polyglycerin
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(plasticizer; collagen-**free** cosmetic prepns. obtained from **crosslinked chitosan** hydrogels)
IT 67-56-1D, Methanol, derivs., biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(plasticizers; collagen-**free** cosmetic prepns. obtained from **crosslinked chitosan** hydrogels)
IT **9012-76-4, Chitosan**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(hydrogel; collagen-**free** cosmetic prepns. obtained from **crosslinked chitosan** hydrogels)
RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 11 OF 17 HCAPLUS COPYRIGHT 2003 ACS
AN 1998:163640 HCAPLUS
DN 128:206128
TI Biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports
IN El Matni, Nada; Labarre, Denis; Fessim, Hatem
PA Societe De Conseils De Recherches Et D'applications Scientifiques (S.C.R.A.S, Fr.; El Matni, Nada; Labarre, Denis; Fessim, Hatem
SO PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DT Patent
LA French
IC ICM C08K005-17
ICS C08B037-08; C08B037-06; C08B037-10; C08L005-08; C08L033-06; A61K009-20; C08L005-08; C08L033-06; C08L033-06; C08L005-08
CC 44-5 (Industrial **Carbohydrates**)
Section cross-reference(s): 35, 63
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9808897	A1	19980305	WO 1997-FR1534	19970829 <--
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	FR 2752843	A1	19980306	FR 1996-10601	19960830 <--
	FR 2752843	B1	19981016		
	ZA 9707671	A	19980223	ZA 1997-7671	19970826 <--
	AU 9741215	A1	19980319	AU 1997-41215	19970829 <--
	AU 730566	B2	20010308		
	EP 922071	A1	19990616	EP 1997-938958	19970829 <--
	EP 922071	B1	20011114		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2001501228	T2	20010130	JP 1998-511342	19970829 <--
	AT 208803	E	20011115	AT 1997-938958	19970829 <--
	ES 2167784	T3	20020516	ES 1997-938958	19970829 <--
	US 6229009	B1	20010508	US 1999-242587	19990218 <--
	NO 9900935	A	19990415	NO 1999-935	19990226 <--
PRAI	FR 1996-10601	A	19960830 <--		
	WO 1997-FR1534	W	19970829 <--		

AB The title **crosslinked** copolymers are based on **non-crosslinked** polycarboxylic polymers and compds. contg. .gtoreq.2 amino groups as **crosslinking** agents, where the copolymers contain .gtoreq. polycarboxylic polysaccharide and .gtoreq.1 other **non-crosslinked** polycarboxylic polymer. The copolymers are used in particular as supports in pharmaceutical compns. A **crosslinked** polymer was prepd. from chondroitin sulfate sodium salt, polymethacrylic acid sodium salt, and L-lysine chlorohydrate.
ST biodegradable **crosslinked** polycarboxylic polymer pharmaceutical support; polysaccharide polycarboxylic acid **crosslinked** copolymer
IT Biodegradable materials
Crosslinking agents
(biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)
IT Amino acids, uses
Glycosaminoglycans, uses
RL: TEM (Technical or engineered material use); USES (Uses)

(biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)
IT Adhesives
(biol.; biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)
IT Polysaccharides, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(carboxy; biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)
IT Drug delivery systems
(controlled-release; biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)
IT Amines, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(diamines; biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)
IT Amines, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(polyamines, nonpolymeric; biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)
IT 203728-50-1P 203728-52-3P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)
IT 70-54-2, Lysine 107-15-3, 1,2-Ethanediamine, uses 616-07-9, Ornithine 4998-57-6, Histidine 9000-69-5, Pectinic acid 9003-01-4 9003-16-1, Poly(fumaric acid) 9004-61-9, Hyaluronic acid 9005-32-7, Alginic acid 9005-49-6, Heparin, uses 9007-28-7, Chondroitin sulfate **9012-76-4, Chitosan** 9050-30-0, Heparan sulfate 9056-36-4, Keratan sulfate 24937-49-3, Polyornithine 24967-94-0, Dermatan sulfate 24991-23-9 25087-26-7, Poly(methacrylic acid) 25104-12-5, Polyornithine 25104-18-1, Polylysine 25513-46-6, Poly(glutamic acid) 25608-40-6, Poly(aspartic acid) 26063-13-8, Poly(aspartic acid) 26099-09-2, Poly(maleic acid) 30140-39-7, Hexanediamine 38000-06-5, Polylysine 64012-50-6, Heptanediamine 69468-17-3, Butanediamine 75413-84-2, Octanediamine 78644-42-5, Poly(malic acid) 129825-84-9, Dodecanediamine
RL: **TEM (Technical or engineered material use)**; USES (Uses)
(biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)
IT **9012-76-4, Chitosan**
RL: **TEM (Technical or engineered material use)**; USES (Uses)
(biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)
RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 12 OF 17 HCAPLUS COPYRIGHT 2003 ACS
AN **1997:473735** HCAPLUS
DN **127:83738**
TI Polymer enhanced foam workover, completion, and kill fluids
IN Sydansk, Robert D.
PA Marathon Oil Company, USA
SO PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM E21B021-00
ICS E21B033-13; E21B043-00
CC 51-2 (Fossil Fuels, Derivatives, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE		APPLICATION NO.	DATE	
PI	WO 9721018	A1	19970612		WO 1996-US17460	19961028	<--
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM						
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG						
	US 5706895	A	19980113		US 1995-568869	19951207	<--
	CA 2234173	AA	19970612		CA 1996-2234173	19961028	<--
	AU 9676010	A1	19970627		AU 1996-76010	19961028	<--
	GB 2322892	A1	19980909		GB 1998-11191	19961028	<--
	GB 2322892	B2	19990901				
	NO 9802600	A	19980605		NO 1998-2600	19980605	<--
PRAI	US 1995-568869		19951207	<--			
	WO 1996-US17460		19961028	<--			

AB Polymer enhanced foam fluid is utilized for completion, workover, and kill operations in wells penetrating subterranean formation. The foam is formed by appropriately adding a gas to an aq. soln. of a substantially **noncrosslinked** water-sol. polymer and surfactant. The soln. and the foam are substantially **free** of **crosslinking** agents. The foam may be generated at the surface or in wellbore.

ST polymer enhanced foam workover completion fluid; well polymer enhanced foam kill fluid

IT Sulfonates
RL: NUU (Other use, unclassified); USES (Uses)
(1-alkene, surfactants; polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)

IT Sulfonic acids, uses
RL: NUU (Other use, unclassified); USES (Uses)
(C14-16-1-alkene, sodium salts, surfactant; polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)

IT Alcohols, uses
RL: NUU (Other use, unclassified); USES (Uses)
(ethoxylated, surfactants; polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)

IT Air
Flue gases
(in polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)

IT Biopolymers
Natural gas, uses
RL: NUU (Other use, unclassified); USES (Uses)
(in polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)

IT Polysaccharides, uses
RL: NUU (Other use, unclassified); USES (Uses)
(poly(vinyl saccharides); in polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)

IT Drilling fluids
Oil wells
Petroleum recovery
Petroleum reservoirs
(polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)

IT Sulfonates
RL: NUU (Other use, unclassified); USES (Uses)
(surfactants; polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)

IT 79-06-1D, Acrylamide, polymers 124-38-9, Carbon dioxide, uses
7727-37-9, Nitrogen, uses 9000-30-0, Guar gum 9003-05-8,
Polyacrylamide 9003-05-8D, Polyacrylamide, partially hydrolyzed
9004-32-4, Cmc 9004-62-0, Hydroxyethyl cellulose 9004-64-2,
Hydroxypropyl cellulose 9005-25-8D, Starch, modified, uses
9012-76-4D, Chitosan, O-carboxy 11138-66-2, Xanthan
gum 39464-87-4, Scleroglucan 73667-50-2, Succinoglycan
RL: NUU (Other use, unclassified); USES (Uses)
(in polymer-enhanced foam workover, completion, and kill fluids as
wellbore fluids)

IT 146103-92-6, Enordet 1215-3S 146104-88-3, Stepanflo 20
RL: NUU (Other use, unclassified); USES (Uses)
(surfactant; polymer-enhanced foam workover, completion, and kill
fluids as wellbore fluids)

IT 7664-93-9D, Sulfuric acid, derivs., ethoxylated, uses
RL: NUU (Other use, unclassified); USES (Uses)
(surfactants; polymer-enhanced foam workover, completion, and kill
fluids as wellbore fluids)

IT **9012-76-4D, Chitosan**, O-carboxy
RL: NUU (Other use, unclassified); USES (Uses)
(in polymer-enhanced foam workover, completion, and kill fluids as
wellbore fluids)

RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 13 OF 17 HCAPLUS COPYRIGHT 2003 ACS
AN **1996:698736** HCAPLUS
DN **125:338884**
TI Influence of **crosslinking** on the acid stability and
physicochemical properties of **chitosan** microspheres
AU Berthold, A.; Cremer, K.; Kreuter, J.
CS Institut fur Pharmazeutische Technologie, Johann Wolfgang
Goethe-Universitat, Frankfurt/Main, 60439, Germany
SO S.T.P. Pharma Sciences (**1996**), 6(5), 358-364
CODEN: STSSE5; ISSN: 1157-1489
PB Editions de Sante
DT Journal
LA English
CC 63-5 (Pharmaceuticals)
AB The aim of the present study was to improve the acid stability of
chitosan microspheres and to investigate the influence of chem.
crosslinking on essential physicochem. properties. For this
purpose, previously manufd. microspheres were **crosslinked** by
glutardialdehyde. The influence of glutardialdehyde concn. and
crosslinking time on the microsphere size, surface charge, drug
loading (with prednisolone sodium phosphate), acid stability, and
hemolytic activity was studied. The acid stability was improved by
crosslinking. Microsphere size and drug loading were influenced
by the concn. of glutardialdehyde and the process time. Size and acid
stability increased with increasing glutardialdehyde concns., whereas drug
loading was reduced. Acid stability as well as loading efficacy also
decreased with increasing reaction time. Size was not influenced by
reaction time. The surface charge was not changed by the
crosslinking process. **Noncrosslinked** as well as
crosslinked microspheres caused no hemolytic effect, indicating
good biocompatibility.
ST **crosslinking chitosan** microsphere stability
physicochem property
IT **Crosslinking**
Erythrocyte
Particle size

(**crosslinking** effect on stability and physicochem. properties of **chitosan** microspheres)
IT Pharmaceutical dosage forms
(microspheres, **crosslinking** effect on stability and physicochem. properties of **chitosan** microspheres)
IT Electric charge
(surface, **crosslinking** effect on stability and physicochem. properties of **chitosan** microspheres)
IT 111-30-8, Glutardialdehyde 7722-84-1, Hydrogen peroxide, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(**crosslinking** effect on stability and physicochem. properties of **chitosan** microspheres)
IT 125-02-0, Prednisolone sodium phosphate **9012-76-4**, **Chitosan**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**crosslinking** effect on stability and physicochem. properties of **chitosan** microspheres)
IT **9012-76-4, Chitosan**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**crosslinking** effect on stability and physicochem. properties of **chitosan** microspheres)
RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 14 OF 17 HCAPLUS COPYRIGHT 2003 ACS
AN 1996:625359 HCAPLUS
DN 125:250807
TI Control of Pore Sizes in Macroporous **Chitosan** and Chitin Membranes
AU Zeng, Xianfang; Ruckenstein, Eli
CS Department of Chemical Engineering, State University of New York, Buffalo, NY, 14260, USA
SO Industrial & Engineering Chemistry Research (**1996**), 35(11), 4169-4175
CODEN: IECRED; ISSN: 0888-5885
PB American Chemical Society
DT Journal
LA English
CC 44-5 (Industrial **Carbohydrates**)
AB A novel method for the prepn. of macroporous **chitosan** and chitin membranes is suggested, which employs silica particles as porogen. The macroporous **chitosan** membranes were prepd. by (1) casting an acidic **chitosan** soln. that contains silica particles, (2) removing the solvent by evapn., and (3) dissolving the silica particles by immersing the membranes into an alk. soln. This simple method provides **chitosan** membranes with high porosity and satisfactory mech. strength, the pore sizes of which can be easily controlled by varying the size of silica particles. The effects of various evapn. conditions and amt. of silica on the flow rate of water through the membranes were investigated. To prevent its dissoln. in acidic solns., the **chitosan** membranes were **cross-linked** under alk. conditions, using epichlorohydrin as the **crosslinking** agent. Macroporous chitin membranes were prepd. by acetylating the **chitosan** membranes with Ac2O in MeOH. In contrast to the **noncrosslinked chitosan** membranes, which are sol. in dil. acidic solns. and insol. in alk. solns., the chitin membranes are insol. both in acidic and basic solns. Both kinds of membranes can be employed in affinity or ion-exchange bio-sepns.
ST pore size macroporous **chitosan** chitin membrane
IT Membranes
(pore size control in macroporous **chitosan** and chitin

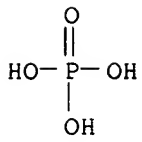
membranes)
IT Pore
(size; pore size control in macroporous **chitosan** and chitin membranes)
IT 1398-61-4, Chitin **9012-76-4, Chitosan**
RL: PRP (Properties); **TEM (Technical or engineered material use)** ; USES (Uses)
(membranes; pore size control in macroporous **chitosan** and chitin membranes)
IT 7631-86-9, Silica, uses
RL: NUU (Other use, unclassified); USES (Uses)
(pore size control agents; pore size control in macroporous **chitosan** and chitin membranes)
IT **9012-76-4, Chitosan**
RL: PRP (Properties); **TEM (Technical or engineered material use)** ; USES (Uses)
(membranes; pore size control in macroporous **chitosan** and chitin membranes)
RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 15 OF 17 HCAPLUS COPYRIGHT 2003 ACS
AN 1994:418134 HCAPLUS
DN 121:18134
TI materials for transplantation
IN Akai, Tomoyuki
PA Kyocera Corp, Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM A61L027-00
CC 63-7 (Pharmaceuticals)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06105901	A2	19940419	JP 1992-257696	19920928
	JP 3064116	B2	20000712		
PRAI	JP 1992-257696		19920928		

AB Biocompatible materials (e.g. bone implants) for transplantation are manufd. by mixing powd. Ca phosphate with chitin, **chitosan** or derivs., subjecting to heat **drying** under vacuum, covering the surface with **noncrosslinked** chitin, and treating with saline or other fluids to give an appropriate viscosity.
ST surgical implant calcium phosphate chitin; bone implant calcium phosphate chitin
IT Transplant and Transplantation
(biocompatible materials contg. calcium phosphate and chitin for)
IT Bone
(implant, calcium phosphate and chitin-contg.)
IT Prosthetic materials and Prosthetics
(implants, calcium phosphate and chitin-contg.)
IT 1398-61-4, Chitin **7757-93-9**, Calcium phosphate **9012-76-4** , **Chitosan**
RL: BIOL (Biological study)
(surgical implants contg.)
IT **7757-93-9**, Calcium phosphate **9012-76-4, Chitosan**
RL: BIOL (Biological study)
(surgical implants contg.)
RN 7757-93-9 HCAPLUS
CN Phosphoric acid, calcium salt (1:1) (8CI, 9CI) (CA INDEX NAME)



Ca

RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 16 OF 17 HCAPLUS COPYRIGHT 2003 ACS
AN **1991:415424** HCAPLUS
DN **115:15424**
TI Sustained release of aspirin from **chitosan** granules
AU Lee, Young Chan; Yoo, Young Mi; Kim, Kong Soo; Shin, Jae Sup
CS Dep. Chem., Chungbuk Natl. Univ., Cheongju, 360-763, S. Korea
SO Polymer (Korea) (**1990**), 14(4), 342-5
CODEN: POLLDG; ISSN: 0379-153X
DT Journal
LA Korean
CC 63-5 (Pharmaceuticals)
AB **Chitosan** was used as a controlled drug delivery device and aspirin was selected as a drug. Release rate was delayed with an increasing proportion of **chitosan**. The drug release rate at high pH was more delayed than at the low pH because **chitosan** granules have greater swelling abilities at low than at high pH. The release rate of aspirin from **chitosan** granules **crosslinked** with glutaraldehyde was delayed >3-fold compared to that from **noncrosslinked** granules.
ST aspirin sustained release **chitosan** granule
IT **Crosslinking**
(of **chitosan** granules, for drug sustained release)
IT Solution rate
(of drugs, from **chitosan** granules, **crosslinking** and pH effect on)
IT Pharmaceutical dosage forms
(granules, sustained-release, of **chitosan**, drug release from, **crosslinking** and pH effect on)
IT 111-30-8, Glutaraldehyde
RL: BIOL (Biological study)
(**chitosan** granules **crosslinking** with, for drug sustained release)
IT **9012-76-4, Chitosan**
RL: BIOL (Biological study)
(granules, drug sustained release from, **crosslinking** and pH effect on)
IT 50-78-2, Aspirin
RL: BIOL (Biological study)
(sustained release of, from **chitosan** granules, **crosslinking** and pH effect on)
IT **9012-76-4, Chitosan**
RL: BIOL (Biological study)
(granules, drug sustained release from, **crosslinking** and pH effect on)
RN 9012-76-4 HCAPLUS

CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 17 OF 17 HCAPLUS COPYRIGHT 2003 ACS
AN **1988:419879** HCAPLUS
DN **109:19879**
TI Porous **chitosan** granules as adsorbents and their use in chromatography
IN Moriguchi, Soyao; Suzuki, Hiroshi; Watanabe, Hiroko; Sato, Motoaki; Abe, Michio; Iwata, Yasuo
PA Showa Denko K. K., Japan; Kawasumi Laboratories Inc.
SO Ger. Offen., 16 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM B01J020-26
ICS B01J020-30; B01D015-08; C08B037-08; A61K047-00; C07K017-10; C08L005-08
ICA C07K015-06; G01N030-92
CC 9-3 (Biochemical Methods)
Section cross-reference(s): 80
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	DE 3727707	A1	19880225	DE 1987-3727707	19870819	<--
	DE 3727707	C2	19920514			
	JP 63048222	A2	19880229	JP 1986-192144	19860819	<--
	JP 63048451	A2	19880301	JP 1986-192141	19860819	<--
	JP 63048452	A2	19880301	JP 1986-192142	19860819	<--
	JP 63048453	A2	19880301	JP 1986-192143	19860819	<--
	JP 63200770	A2	19880819	JP 1987-33472	19870218	<--
	GB 2195344	A1	19880407	GB 1987-19348	19870814	<--
	GB 2195344	B2	19901024			
	US 4879340	A	19891107	US 1987-86989	19870819	<--
	GB 2232984	A1	19910102	GB 1990-16548	19900727	<--
	GB 2232984	B2	19910508			

PRAI JP 1986-192141 19860819 <--
JP 1986-192142 19860819 <--
JP 1986-192143 19860819 <--
JP 1986-192144 19860819 <--
JP 1987-33472 19870218 <--
GB 1987-19348 19870814 <--

AB Porous granules of **uncrosslinked** or **crosslinked** **chitosan**, to which protein A is covalently bound, are useful for removal of an interleukin 2 inhibitor. The protein A is bound via a linker to the amino groups of **uncrosslinked** **chitosan**, and to these as well as the amino groups of the **crosslinking** agent in **crosslinked** **chitosan**. **Chitosan** granules bearing similarly bound lectin are useful as adsorbents for affinity chromatog. **Chitosan** granules bearing .omega.-carboxalkanoyl and acyl groups are useful as chromatog. carriers. An adsorbent for Ig comprises **uncrosslinked** or **crosslinked** **chitosan** granules. Xylylene diisocyanate-**crosslinked** porous **chitosan** granules (av. granule diam. 0.1 mm; av. pore size 0.07 .mu.m) were treated with glutaraldehyde, remaining **free** amino groups were blocked with Ac2O, and the granules were treated with N-hydroxysuccinimide and DCCD followed by Con A in the presence of Me .alpha.-mannopyranoside. The conjugate contained 15 mg Con A/g **dry** granules. This adsorbent was packed in a column and used for sepn. of p-nitrophenyl .alpha.-D-galactopyranoside and p-nitrophenyl .alpha.-D-mannopyranoside.

ST **chitosan** adsorbent Ig; protein A adsorbent interleukin

inhibitor; lectin **chitosan** adsorbent carbohydrate; affinity chromatog adsorbent **chitosan**

IT Immunoglobulins
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(adsorption of, on **chitosan**)

IT Ovalbumins
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(adsorption of, on **chitosan** deriv.)

IT Adsorbents
(**chitosan**)

IT Immunoglobulins
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(A, adsorption of, on **chitosan**)

IT Proteins, specific or class
RL: ANST (Analytical study)
(A, immobilized, on **chitosan**, Ig and interleukin 2 inhibitor adsorption on)

IT Immunoglobulins
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(G, adsorption of, on **chitosan**)

IT Immunoglobulins
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(M, adsorption of, on **chitosan**)

IT Chromatography, column and liquid
(affinity, stationary phases, lectins immobilized on **chitosan** as)

IT Carboxylic acids, uses and miscellaneous
RL: USES (Uses)
(di-, immobilized, on **chitosan**, as chromatog. stationary phase)

IT Wheat
(germ, lectin of, immobilized on **chitosan** for affinity chromatog.)

IT Agglutinins and Lectins
(immobilized, on **chitosan**, for affinity chromatog.)

IT Lymphokines and Cytokines
RL: ANST (Analytical study)
(interleukin 2, sepn. of, protein A immobilized on **chitosan** for)

IT **9012-76-4, Chitosan**
RL: ANST (Analytical study)
(as adsorbent, for chromatog.)

IT 822-06-0D, Hexamethylene diisocyanate, reaction products with **chitosan** 25854-16-4D, Xylylene diisocyanate, reaction products with **chitosan**
RL: ANST (Analytical study)
(as adsorbents for chromatog.)

IT 11028-71-0
RL: ANST (Analytical study)
(immobilized, on **chitosan**, for affinity chromatog.)

IT 7493-95-0, p-Nitrophenyl .alpha.-D-galactopyranoside 10357-27-4, p-Nitrophenyl .alpha.-D-mannopyranoside
RL: PROC (Process)
(sepn. of, by chromatog. on **chitosan**-immobilized Con A)

IT **9012-76-4, Chitosan**
RL: ANST (Analytical study)
(as adsorbent, for chromatog.)

RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

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=> fil wpix
FILE 'WPIX' ENTERED AT 12:31:30 ON 03 FEB 2003
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MOST RECENT DERWENT UPDATE:     200307        <200307/DW>
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    GUIDES, PLEASE VISIT:
    http://www.derwent.com/userguides/dwpi_guide.html <<<

=> d all abeq tech abex tot

L115 ANSWER 1 OF 7  WPIX (C) 2003 THOMSON DERWENT
AN   2001-381174 [40]   WPIX
DNC  C2001-116703
TI   Polymer blend that swells in an acidic environment and deswells in a more
     neutral or basic environment, useful in the production of controlled
     release tablets, comprises chitosan and a second polymer..
DC   A96 B07
IN   BARK, J S; LIU, F; ZENTNER, G M; BARK, J
PA   (MACR-N) MACROMED INC
CYC  94
PI   WO 2001034677 A1 20010517 (200140)* EN   29p    C08G063-48 <----------
        RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
            NL OA PT SD SE SL SZ TR TZ UG ZW
         W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
            DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
            LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
            SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
     AU 2001017605 A  20010606 (200152)              C08G063-48
     EP 1240230    A1 20020918 (200269)  EN          C08G063-48
         R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
            RO SE SI TR
     KR 2002047337 A  20020621 (200280)              C08L005-08      <--
     BR 2000015521 A  20021119 (200305)              C08G063-48
ADT  WO 2001034677 A1 WO 2000-US30908 20001110; AU 2001017605 A AU 2001-17605
     20001110; EP 1240230 A1 EP 2000-980328 20001110, WO 2000-US30908 20001110;
     KR 2002047337 A KR 2002-705826 20020506; BR 2000015521 A BR 2000-15521
     20001110, WO 2000-US30908 20001110
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FDT AU 2001017605 A Based on WO 200134677; EP 1240230 A1 Based on WO 200134677; BR 2000015521 A Based on WO 200134677
PRAI US 2000-710403 20001109; US 1999-438884 19991112
IC ICM C08G063-48; **C08L005-08**
ICS A61K031-73; C08G063-91; C08H001-06; C08J005-10; C08L001-08; C08L029-04
AB WO 200134677 A UPAB: 20011024
NOVELTY - A new polymer blend (I) that swells in an acidic environment and deswells in a more neutral or basic environment comprises (A) **chitosan** and (B) a second polymer wherein (A) and (B) are not covalently or ionically **crosslinked**. (I) is prepared by dissolving (A) and (B) in an acidic aqueous solution which is dehydrated to recover (I).
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a polymer blend drug composition (II) that when exposed to aqueous conditions, swells in an acidic environment and deswells in a more neutral or basic environment and comprises a drug (C) combined with the polymer blend (I).
USE - The polymer blend (I) is useful in the production of tablets for oral ingestion, suppositories or implantable capsules.
ADVANTAGE - The polymer blend (I) allows the modulation of the release of biologically active material as a function of pH without dissolving.
Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: A07-A01; A10-E09; A12-V01; B04-C02A2; **B04-C02E3**; B04-C03; B12-M08; B12-M10; B12-M11B; B12-M11C; B14-J01B4
TECH UPTX: 20010719
TECHNOLOGY FOCUS - POLYMERS - Preferred Composition: The weight ratio of **Chitosan** (A) to the second polymer (B) is 1:4-10:1. (B) is polyether glycol, cellulose ester, poloxamer, polysaccharide, polyvinylpyrrolidone and/or polyvinyl alcohol. **Chitosan** (A) is 50-95 % deacetylated and has a Brookfield viscosity of 100-10,000, preferably 440-3,640 cps. The acid is acetic acid, citric acid and/or hydrochloric acid, preferably acetic acid and is a 0.5-11 (8-11) M aqueous solution. (B) has a weight average molecular weight (Mw) of 1,000-4,000,000. The blend (I) contains pH controlling additives or excipients to alter the swelling and deswelling properties. The drug (C) is combined with (A) and (B) by dissolving (C), (A) and (B) in the acidic aqueous solution to form a drug containing aqueous polymer blend and dehydrating and grinding the drug containing aqueous polymer blend. (C) is combined with (A) and (B) by swelling (B) in an acidic solution containing (C), equilibrating and dehydrating the swollen polymer blend containing the drug. The drug (C) is combined with (A) and (B) by admixing (C) in a particulate form with (I) in a particulate form.
ABEX
EXAMPLE - A solution comprising 85 % deacetylated **chitosan** (Brookfield viscosity of 810 cps) (15 g) in 1.0 M acetic acid (1 L) was mixed with polyethylene glycol (PEG) mol. wt. 2000) such that the weight ratio of **chitosan** to PEG was 2:1. The solution was then dried to form a brittle solid material which showed acceptable swelling behavior (did not dissolves at pH 2 after 24 hours) and deswelling behavior (Sorensen's phosphate buffer, pH 7.4, 80-90 % deswelling in 6-12 hours) without dissolving.

L115 ANSWER 2 OF 7 WPIX (C) 2003 THOMSON DERWENT
AN **2001-169891** [18] WPIX
DNC **C2001-050996**
TI Biodegradable, skin-compatible, **crosslinker-free** **chitosan** preparation, useful in cosmetic, medicinal or foodstuff applications, obtained by precipitation and dehydration.
DC B07 D13 D21 P34
IN **HEILEMANN, A; HOLZER, J; SANDER, A;**

SCHAEFER, G
PA (COGN-N) COGNIS DEUT GMBH; (COGN-N)
COGNIS DEUT GMBH & CO KG
CYC 21
PI DE 19932075 A1 20010118 (200118)* 10p C08B037-08 <-- 7 ∠.
WO 2001004207 A1 20010118 (200118) DE C08L005-08 <--
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: JP US
EP 1198508 A1 20020424 (200235) DE C08L005-08 <--
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
ADT DE 19932075 A1 DE 1999-19932075 19990712; WO 2001004207 A1 WO 2000-EP6162 20000701; EP 1198508 A1 EP 2000-943964 20000701, WO 2000-EP6162 20000701
FDT EP 1198508 A1 Based on WO 200104207
PRAI DE 1999-19932075 19990712
IC ICM **C08B037-08; C08L005-08**
ICS **A23L001-056**; A23L001-29; A61K007-00; **A61K031-722**; A61K047-36; A61L015-28; A61P017-02
AB DE 19932075 A UPAB: 20010402
NOVELTY - A new **crosslinker-free** preparation (I) is obtained by treating an aqueous solution and/or homogenized suspension of **chitosans** (II) with precipitating agents (III) then dehydrating.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for the preparation of (I) as above.

ACTIVITY - Hemostatic; vulnerary.

MECHANISM OF ACTION - None given.

USE - The use of (I) is claimed as a cosmetic agent, a medicament and/or medicinal product, a foodstuff or a food additive. Typically (I) is used as a cosmetic agent in the form of a dry film, absorber, mask or hemostatic foam for small wounds (e.g. shaking cuts); as a medicament or medicinal product in the form of a wound plug, wound or burn dressing, drug-releasing dressing, mono-woven or carrier for oral administration of drugs (e.g. analgesics or antibiotics); or as a nutritional supplement, dietetic foodstuff or food additive.

ADVANTAGE - (I) has mechanical properties comparable with those of prior art products obtained using chemical **crosslinkers** (due to physical **crosslinking** induced by (III)), but is **free** of chemical **crosslinker**-associated problems such as induction of skin irritation or allergies and reduction of biodegradability. (I) can be prepared with a 3-dimensional structure, in the form of a block, non-woven or mask; has good mechanical stability (in the wet or dry state), elasticity, swellability and water uptake properties; has good compatibility with skin and with other ingredients; is completely biodegradable; and can be prepared easily on an industrial scale. Typically (I) has an impact resistance at break (DIN 53 571, test piece B) of 10-1000 (especially 50-200) mM/mm2 in the dry state or 10-500 (especially 30-100) mM/mm2 in the wet state; an extension at break of 1-50 (especially 5-20)% in the dry state; and a water uptake capacity of at least 5 (especially at least 15) g/g.

Dwg.0/0
FS CPI GMPI
FA AB; DCN
MC CPI: **B04-C02E3**; B12-M02D; B14-E11; B14-N17A; B14-N17B; B14-R01; D08-B; D08-B09A
TECH UPTX: 20010402
TECHNOLOGY FOCUS - POLYMERS - Preferred Process: The starting solution or suspension contains 0.1-15 wt. % (II) (specifically cationic derivatized **chitosan**), and has pH 1-7.5 and viscosity 1000-100000 (preferably 10000-40000) mPa.s. (III) is an aqueous solution of an alkali(ne earth) metal (bi)carbonate, hydrogen phosphate or hydroxide, ammonia or nitrogen-containing organic base, especially aqueous sodium bicarbonate solution. The precipitated (II) has pH 5.0-14. Dehydration is effected by lyophilization. Auxiliaries and additives (specifically polyols, emulsifiers, fibers, dyes, perfume oils, aromas, cosmetic or

pharmaceutical active agents or foods additives) are optionally added to the starting solution (before and/or after addition of (III)) or after dehydration.

ABEX

EXAMPLE - A suspension comprising 2 kg Hydagen CMFP (RTM; **chitosan**), 98 kg water and 0.346 kg L(+)-lactic acid was homogenized in a colloid mill at 40degreesC until the viscosity was 23000 mPa.s, cooled to 10degreesC and degassed under vacuum. 9 kg portions of the mixture were each mixed with 360 g of 8.05 wt. % sodium bicarbonate solution for 2 minutes, then cast in molds at a thickness of 22 mm. After 3 hours the suspension was frozen then lyophilized at 80degreesC/1 mbar to give blocks of thickness 1.5 mm and size 20 x 30 cm.

L115 ANSWER 3 OF 7 WPIX (C) 2003 THOMSON DERWENT
AN **2001-160577** [17] WPIX
DNC **C2001-048043**
TI Biodegradable, skin-compatible, **crosslinker-free** biopolymer preparation, useful in cosmetic, medicinal or foodstuff applications, obtained by precipitation and dehydration.
DC B07 D13 D21
IN **HEILEMANN, A; HOLZER, J; SANDER, A; SCHAEFER, G**
PA (COGN-N) **COGNIS DEUT GMBH**; (COGN-N) **COGNIS DEUT GMBH & CO KG**
CYC 21
PI DE 19932076 A1 20010118 (200117)* 9p C08B037-00
WO 2001004187 A1 20010118 (200117) DE C08J003-00
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: JP US
EP 1198494 A1 20020424 (200235) DE C08J003-00
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
ADT DE 19932076 A1 DE 1999-19932076 19990712; WO 2001004187 A1 WO 2000-EP6161 20000701; EP 1198494 A1 EP 2000-949239 20000701, WO 2000-EP6161 20000701
FDT EP 1198494 A1 Based on WO 200104187
PRAI DE 1999-19932076 19990712
IC ICM C08B037-00; C08J003-00
ICS A23L001-29; A61K007-00; A61K007-48; C08J005-00
AB DE 19932076 A UPAB: 20010328
NOVELTY - A new **crosslinker-free** preparation (I) is obtained by treating an aqueous solution and/or homogenized suspension of biopolymers (II) with precipitating agents (III) then dehydrating.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for the preparation of (I) as above.

ACTIVITY - Hemostatic; vulnerary.

MECHANISM OF ACTION - None given.

USE - The use of (I) is claimed as a cosmetic agent, a medicament and/or medicinal product, a foodstuff or a food additive. Typically (I) is used as a cosmetic agent in the form of a dry film, absorber, mask or hemostatic foam for small wounds (e.g. shaking cuts); as a medicament or medicinal product in the form of a wound plug, wound or burn dressing, drug-releasing dressing, mono-woven or carrier for oral administration of drugs (e.g. analgesics or antibiotics); or as a nutritional supplement, dietetic foodstuff or food additive.

ADVANTAGE - (I) has mechanical properties comparable with those of prior art products obtained using chemical **crosslinkers** (due to physical **crosslinking** induced by (III)), but is **free** of chemical **crosslinker**-associated problems such as induction of skin irritation or allergies and reduction of biodegradability. (I) can be prepared with a 3-dimensional structure, in the form of a block, non-woven or mask; has good mechanical stability (in the wet or dry state), elasticity, swellability and water uptake properties; has good compatability with skin and with other ingredients; is completely biodegradable; and can be prepared easily on an industrial scale.

Typically (I) has an impact resistance at break (DIN 53 571, test piece B) of 10-1000 (especially 50-200) mM/mm2 in the dry state or 10-500 (especially 30-100) mM/mm2 in the wet state; an extension at break of 1-50 (especially 5-20)% in the dry state; and a water uptake capacity of at least 5 (especially at least 15) g/g.
Dwg.0/0

FS CPI
FA AB; DCN
MC CPI: B04-C02A1; B04-C02A2; B04-C02D; B05-A01A; B05-A01B; B05-C04; B14-N17B; B14-R01; D08-B; D08-B09A
TECH UPTX: 20010328
TECHNOLOGY FOCUS - POLYMERS - Preferred Process: The starting solution or suspension contains 0.1-15 wt. % (II), and has pH 1-12 and viscosity 1000-100000 (preferably 10000-40000) mPa.s. (III) is an aqueous solution of an alkali(ne earth) metal (bi)carbonate, hydrogen phosphate or hydroxide, ammonia or nitrogen-containing organic base, especially aqueous sodium bicarbonate solution; or an aqueous solution of mineral acid or organic carboxylic acid. The precipitated (II) has pH 1.0-14. Dehydration is effected by lyophilization. Auxiliaries and additives (specifically polyols, emulsifiers, fibers, dyes, perfume oils, aromas, cosmetic or pharmaceutical active agents or foods additives) are optionally added to the starting solution (before and/or after addition of (III)) or after dehydration. Biopolymers: Suitable (I) (not specified in the claims) are polysaccharides (e.g. inulin, mannans, galactans, xylans, chitin, **chitosan**, cellulose, pectin, alginates, carrageenan, agar or locust bean gum) or their derivatives (e.g. carboxymethyl cellulose; anionically or nonionically derivatized **chitosan**; or polyelectrolyte derivatives having carboxy and/or sulfo groups).
ABEX
EXAMPLE - None given.

L115 ANSWER 4 OF 7 WPIX (C) 2003 THOMSON DERWENT
AN **2001-014859** [02] WPIX
CR 1994-135566 [16]; 1999-166652 [14]
DNC **C2001-003944**
TI Encapsulated viable cells comprise viable cells dispersed in 3-dimensional particulate, essentially **non-crosslinked, chitosan** core matrices encapsulated in thermoplastic semipermeable membrane.
DC B04 D16
IN AEBISCHER, P; ZIELINSKI, B A
PA (UYBR-N) UNIV BROWN RES FOUND
CYC 1
PI US 6140089 A 20001031 (200102)* 9p C12N011-10 <- check.
ADT US 6140089 A Cont of US 1992-952249 19920928, CIP of US 1994-176323 19940103, Div ex US 1994-294149 19940822, US 1999-251004 19990216
FDT US 6140089 A Div ex US 5871985
PRAI US 1994-294149 19940822; US 1992-952249 19920928; US 1994-176323 19940103; US 1999-251004 19990216
IC ICM C12N011-10
ICS C12N005-00; C12N011-04
AB US 6140089 A UPAB: 20010110
NOVELTY - Encapsulated viable cells comprising viable cells dispersed in a three-dimensional particulate, essentially **non-crosslinked, chitosan** core matrix encapsulated in a thermoplastic semipermeable membrane formed by precipitation of a **chitosan** solution containing the cells.
DETAILED DESCRIPTION - Encapsulated viable cells comprise viable cells dispersed in a three-dimensional particulate, essentially **non-crosslinked, chitosan** core matrix encapsulated in a thermoplastic semipermeable membrane, in which the core matrix is formed by precipitation of a **chitosan** solution containing the cells before the solution has been encapsulated in a

thermoplastic semipermeable membrane.

An INDEPENDENT CLAIM is also included for implantable immunoisolatory vehicles for providing biologically active products to hosts.

ACTIVITY - Antidiabetic; antiparkinsonian; neuroprotective.

MECHANISM OF ACTION - None given.

USE - The encapsulated viable cells are used in implantable immunoisolatory vehicles to provide biologically active products to hosts for the treatment of diabetes, Parkinson's disease and other neurological disorders, and to deliver sources of trophic or sprouting factors to support peripheral nerve repair or regeneration.

ADVANTAGE - The encapsulated viable cells are formed in the absence of **crosslinking** agents and are essentially **uncrosslinked** . The particulate **chitosan** provides or acts as an irregular scaffolding into which cells are **free** to grow. The matrix provides a large growth area that does not restrict the ability of the cells to divide and expand. Formation of the encapsulated viable cells is not dependent upon the presence of the **chitosan** matrix so that the properties of either the jacket or the matrix may be varied without concerns for effects on each other. The jacket allows diffusion of nutrients, waste materials and secreted products when cultured or implanted in an individual, but may be immunostimulatory and may block the cellular and molecular effectors of immunological rejection.

Dwg.0/2

FS CPI

FA AB; DCN

MC CPI: **B04-C02E3**; B04-F01; B04-F02; B04-F04; B12-M11C; B14-J01; B14-J01A3; B14-S04; D05-H08

TECH UPTX: 20010110

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Cells: The cells are neurosecretory cell lines (PC12 cells), beta-derived cell lines (NIT or RIN cells), fibroblasts, myocytes or glial cells (astrocytes).

ABEX

EXAMPLE - No relevant example is given.

L115 ANSWER 5 OF 7 WPIX (C) 2003 THOMSON DERWENT

AN **1998-089294** [09] WPIX

DNC **C1998-030265**

TI Cosmetic or dermatological composition in form of viscous aqueous gel for topical application in hair dressing and styling gels - contains **non crosslinked** acrylic copolymer with hydrophobic chain, surfactant and film forming polymer.

DC A14 A25 A96 B04 D21

IN DUBIEF, C; DUPUIS, C

PA (OREA) L'OREAL SA

CYC 1

PI FR 2750047 A1 19971226 (199809)* 23p A61K007-11

ADT FR 2750047 A1 FR 1996-7611 19960619

PRAI FR 1996-7611 19960619

IC ICM A61K007-11

AB FR 2750047 A UPAB: 19980302

Cosmetic or dermatological composition for topical application, in the form of a stable, high viscosity aqueous gel comprises (wt.%) (a) 0.1-20 at least one **non-crosslinked** acrylic copolymer with a hydrophobic chain; (b) 0.01-1 of a surface active agent; and (c) 0.05-10 of a film-forming cationic or amphoteric polymer with a cationic charge density of less than about 3.5 meq/g.

USE - The composition is used in hair dressing and hair styling gels.

ADVANTAGE - The combination of components (a), (b) and (c) gives stable, high viscosity aqueous gels with excellent adhesive properties, ease of application and distribution on the hair, and which due to their low surfactant content do not need to be rinsed off.

Dwg.0/0

FS CPI

FA AB; DCN
MC CPI: A04-F01A; A12-V01; A12-V04A; B04-C03; B14-N17; B14-R01; D08-B03; D08-B05

L115 ANSWER 6 OF 7 WPIX (C) 2003 THOMSON DERWENT
AN **1997-319852** [29] WPIX
DNN **N1997-264721** DNC **C1997-103365**
TI Process for hydrocarbon well completion, workover and kill operations - by preparing aqueous solution of water-soluble **non-crosslinked** polymer and water-soluble surfactant to which gas is added to form polymer enhanced foam and placing foam in well.
DC A11 A14 A97 H01 Q49
IN SYDANSK, R D
PA (MAOC) MARATHON OIL CO
CYC 74
PI WO 9721018 A1 19970612 (199729)* EN 42p E21B021-00
RW: AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN
AU 9676010 A 19970627 (199742) E21B021-00
US 5706895 A 19980113 (199809) 22p E21B021-00
NO 9802600 A 19980605 (199836) E21B000-00
GB 2322892 A 19980909 (199838) E21B021-00
GB 2322892 B 19990901 (199937) E21B021-00
MX 9803724 A1 19980901 (200017) E21B021-00
ADT WO 9721018 A1 WO 1996-US17460 19961028; AU 9676010 A AU 1996-76010 19961028; US 5706895 A US 1995-568869 19951207; NO 9802600 A WO 1996-US17460 19961028, NO 1998-2600 19980605; GB 2322892 A WO 1996-US17460 19961028, GB 1998-11191 19980522; GB 2322892 B WO 1996-US17460 19961028, GB 1998-11191 19980522; MX 9803724 A1 MX 1998-3724 19980511
FDT AU 9676010 A Based on WO 9721018; GB 2322892 A Based on WO 9721018; GB 2322892 B Based on WO 9721018
PRAI US 1995-568869 19951207
REP US 3530940; US 3637021; US 4440653; US 4995461; US 5129457; US 5358046
IC ICM E21B000-00; E21B021-00
ICS E21B033-13; E21B043-00
AB WO 9721018 A UPAB: 19970716
Process for use during hydrocarbon well completion, workover and kill operations comprises (a) preparing an aqueous solution of a water-soluble, **non-crosslinked** polymer and a water-soluble surfactant, the aqueous solution being **free** of agents capable of **crosslinking** the polymer, (b) adding a gas to the aqueous solution to form a polymer enhanced foam and, (c) placing the foam in a well penetrating a subterranean formation during completion, workover or kill operation.

USE - For use in hydrocarbon well completion, workover and kill operations.

ADVANTAGE - Fluid effectively performs at relatively low fracture or parting pressure gradient without fracturing or parting the formation, prevents leak-off under a wide range of conditions, and is stable under harsh formation conditions. Also cost-effective and practical to use, is self-healing and is easy to remove from the wellbore after operation completion.

Dwg.0/12
FS CPI GMPI
FA AB
MC CPI: A08-B01; A08-C01; A08-D01; A11-B06A; A11-C02D; A12-S04A1; A12-W10; H01-C
ABEQ US 5706895 A UPAB: 19980302
Process for use during hydrocarbon well completion, workover and kill operations comprises (a) preparing an aqueous solution of a water-soluble,

non-crosslinked polymer and a water-soluble surfactant, the aqueous solution being **free** of agents capable of **crosslinking** the polymer, (b) adding a gas to the aqueous solution to form a polymer enhanced foam and, (c) placing the foam in a well penetrating a subterranean formation during completion, workover or kill operation.

USE - For use in hydrocarbon well completion, workover and kill operations.

ADVANTAGE - Fluid effectively performs at relatively low fracture or parting pressure gradient without fracturing or parting the formation, prevents leak-off under a wide range of conditions, and is stable under harsh formation conditions. Also cost-effective and practical to use, is self-healing and is easy to remove from the wellbore after operation completion.

Dwg.0/11

L115 ANSWER 7 OF 7 WPIX (C) 2003 THOMSON DERWENT
AN **1994-135566** [16] WPIX
CR 1999-166652 [14]; 2001-014859 [02]
DNC **C1994-062752**
TI Encapsulation device for viable cells - comprising a 3-dimensional particulate, **non-crosslinked chitosan** core matrix in a jacket.
DC B04 D16
IN AEBISCHER, P; ZIELINSKI, B A
PA (UYBR-N) UNIV BROWN RES FOUND
CYC 23
PI WO 9407999 A1 19940414 (199416)* EN 33p C12N011-10
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
W: AU CA FI JP KR NO
AU 9349322 A 19940426 (199432) C12N011-10
FI 9501239 A 19950316 (199525) C12N000-00
NO 9501173 A 19950327 (199526) C12N000-00
EP 663951 A1 19950726 (199534) EN C12N011-10
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
JP 08502166 W 19960312 (199644) 27p C12N011-10
EP 663951 A4 19970402 (199732) C12N011-10
AU 687359 B 19980226 (199821) C12N005-00
EP 663951 B1 20020605 (200238) EN C12N011-10
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
DE 69331997 E 20020711 (200253) C12N011-10
ES 2177549 T3 20021216 (200306) C12N011-10
ADT WO 9407999 A1 WO 1993-US9023 19930922; AU 9349322 A AU 1993-49322 19930922; FI 9501239 A WO 1993-US9023 19930922, FI 1995-1239 19950316; NO 9501173 A WO 1993-US9023 19930922, NO 1995-1173 19950327; EP 663951 A1 EP 1993-921720 19930922, WO 1993-US9023 19930922; JP 08502166 W WO 1993-US9023 19930922, JP 1994-509162 19930922; EP 663951 A4 EP 1993-921720 ; AU 687359 B AU 1993-49322 19930922; EP 663951 B1 EP 1993-921720 19930922, WO 1993-US9023 19930922; DE 69331997 E DE 1993-631997 19930922, EP 1993-921720 19930922, WO 1993-US9023 19930922; ES 2177549 T3 EP 1993-921720 19930922
FDT AU 9349322 A Based on WO 9407999; EP 663951 A1 Based on WO 9407999; JP 08502166 W Based on WO 9407999; AU 687359 B Previous Publ. AU 9349322, Based on WO 9407999; EP 663951 B1 Based on WO 9407999; DE 69331997 E Based on EP 663951, Based on WO 9407999; ES 2177549 T3 Based on EP 663951
PRAI US 1992-952249 19920928
REP US 4167447; US 4495288; US 4803168; US 4892538; US 5158881; WO 8702703; EP 301777; US 4713249; WO 8800237
IC ICM C12N000-00; C12N005-00; C12N011-10
ICS A61K009-16; A61L027-00; C12N005-02; C12N005-06; C12N011-04; G01N033-50
AB WO 9407999 A UPAB: 20030124
An encapsulation device for maintaining, growing proliferating or

differentiating viable cells comprises a 3-dimensional particulate, **non-crosslinked chitosan** core matrix enclosed in a permeable or semipermeable jacket.

USE/ADVANTAGE - The device can be used to encapsulate neurosecretory cell lines (e.g. PC12), beta-cell-derived cell lines (e.g. NIT or RIN), fibroblasts, myocytes or glial cells. The device can be used as an implantable immuno-isolator vehicle for providing a biologically active prod. or function to an individual. The **chitosan** core matrix promotes viability and maintenance of function of the cells.

Dwg.0/2

FS CPI
FA AB
MC CPI: **B04-C02E3**; B04-F01; D05-H08

=> d all abeq tech abex tot

L119 ANSWER 1 OF 2 WPIX (C) 2003 THOMSON DERWENT
AN **2002-074903** [10] WPIX
CR 2001-031656 [66]
DNC **C2002-022206**
TI Dried hemoactive material, for inhibiting bleeding and delivering active agent to patients, comprises **crosslinked** polymer which forms hydrogel, dispersed in **non-crosslinked** polymer which solubilizes when exposed to blood.
DC A96 B04 B07 D22
IN OSAWA, A E; REICH, C J; TRAN, H
PA (FUSI-N) FUSION MEDICAL TECHNOLOGIES INC; (OSAW-I) OSAWA A E; (REIC-I) REICH C J; (TRAN-I) TRAN H
CYC 21
PI WO 2000076533 A1 20001221 (200210)* EN 26p A61K038-00
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: JP
EP 1185288 A1 20020313 (200225) EN A61K038-00
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
US 2002042378 A1 20020411 (200227) A61K038-00
JP 2003501215 W 20030114 (200306) 29p A61L033-00
ADT WO 2000076533 A1 WO 2000-US15998 20000609; EP 1185288 A1 EP 2000-942742 20000609, WO 2000-US15998 20000609; US 2002042378 A1 US 1999-330315 19990610; JP 2003501215 W WO 2000-US15998 20000609, JP 2001-502866 20000609
FDT EP 1185288 A1 Based on WO 200076533; JP 2003501215 W Based on WO 200076533
PRAI US 1999-330315 19990610
IC ICM A61K038-00; A61L033-00
ICS A01N025-34; A01N043-04; A61F013-00; A61K009-00; A61K009-36; A61K009-40; A61K031-715; A61K031-74; A61K035-14; A61K038-16; A61K038-17; C07K001-00; C07K014-00; C07K016-00; C07K017-00; C08H001-00; C08H001-06; C09H001-00; C09H003-00; C09H003-02
AB WO 200076533 A UPAB: 20020213
NOVELTY - A dried hemoactive material, comprises:

(i) a **crosslinked** biologically compatible polymer which forms a hydrogel when exposed to blood; and

(ii) a **non-crosslinked** biologically compatible polymer which solubilizes when exposed to blood;

The **crosslinked** polymer is dispersed in a dried matrix of the **non-crosslinked** polymer.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) a kit comprising:

(a) a sterile pack;

(b) a sterile sheet of the hemostatic material in the sterile pack; and

(c) instructions for use.

(2) a method for inhibiting bleeding, comprises applying the material

to a wound site;

(3) a method for delivering an active agent to a patient, comprises exposing the material to a patient's blood; and

(4) the preparation of the hemoactive material.

ACTIVITY - Vulnerary; Coagulant.

MECHANISM OF ACTION - None given.

USE - The material is used for inhibiting bleeding and for delivering an active agent to a patient (both claimed), e.g. for delivering drugs to an abraded or damaged tissue surface, such as the liver, spleen, heart, kidney, intestine, blood vessels, vascular organs, etc.

ADVANTAGE - The sheet can conform to any irregularities in the tissue surface, and will immediately begin absorbing water from the blood present on the site.

Dwg.0/3

FS CPI

FA AB; DCN

MC CPI: A12-V01; A12-V03A; B04-B04D2; B04-C02A; B04-C02B; B04-C02D; B04-C03; B04-D01; B04-G01; B04-H19; B04-J01; B04-L01; B04-N02; B14-A01; B14-A02; B14-C03; B14-F02; B14-F08; B14-H01; D09-C04B

TECH UPTX: 20020213

TECHNOLOGY FOCUS - POLYMERS - Preferred Composition: The **crosslinked** polymer comprises 50-95 wt.% of the material, and the **non-crosslinked** material comprises 50-1 wt.% of the material. A plasticizer is also present (in at least the **non-crosslinked** polymer) and comprises 1-20 wt.% of the material. An active agent is also present , preferably in both the **non-crosslinked** polymer and in the **crosslinked** polymer.

Preferred Materials: The hemoactive material comprises a dry gelatin matrix, with dry, **crosslinked** gelatin polymer particles dispersed in the dry **non-crosslinked** gelatin matrix.

The plasticizer is selected from polyethylene glycol, sorbitol, and glycerol. The active agents comprise antibiotics, anti-neoplastic agents, bacteriostatic agents, bactericidal agents, antiviral agents, anesthetics, anti-inflammatory agents, hormones, anti-angiogenic agents, antibodies, enzymes, enzyme inhibitors, and neurotransmitters. The active agent is a hemostatic substance, preferably a clotting factor (preferably thrombin).

Preferred **Crosslinked** Polymer: The **crosslinked** polymer is:

(a) a protein selected from the group comprising gelatin, collagen, albumin, hemoglobin, fibrinogen, fibrin, fibronectin, elastin, keratin, laminin, and casein; or

(b) a carbohydrate (derivative) selected from glycosaminglycans, starches, celluloses, hemicelluloses, xylan, agarose, alginate, and **chitosan** ; or

(c) a non-biological hydrogel-forming polymer or copolymer selected from the group consisting of polyacrylates, polymethacrylates, polyacrylamides, polyvinyl polymers, polylactides glycolides, polycaprolactones, polyoxyethylenes, and their copolymers.

Preferred **Non-Crosslinked** Polymer: The **non-crosslinked** biologically compatible polymer is:

(a) a protein selected from the group consisting of gelatin, collagen, albumin, elastin, and keratin; or

(b) a carbohydrate (derivative) selected from glycosaminoglycans, alginate, starch, cellulose, and their derivatives.

Preferred Properties: The **crosslinked** polymer has a degradation time of at least one day. The **non-crosslinked** polymer solubilizes in at most 15 minutes when exposed to blood. The **crosslinked** polymer is fragmented so that, upon hydration in blood, the polymer will form a gel with a sub-unit size in the range from 0.01 mm to 5 mm. The **crosslinked** polymer has an equilibrium swell of 400-5,000%.

Preferred Form: The material is in the form of a sheet having a thickness of 1-25 mm. The sheet is packed in a sterile pack.

Preferred Preparation: The hemostatic material is prepared by:
(a) dissolving a **non-crosslinked** biologically
compatible polymer which solubilizes when exposed to blood in an aqueous medium;
(b) suspending particles of a **crosslinked** biologically
compatible polymer which forms a hydrogel when exposed to blood in the aqueous medium; and
(c) drying the aqueous medium to form a solid phase comprising the dried polymeric particles in a dry matrix of the **non-crosslinked** polymer.

ABEX

EXAMPLE - Heparin was administered intravenously to a farm grade Hampshire/Yorkshire cross pig to prolong the activated clotting time of the animal to approximately three to five times its baseline value. A shallow circular divot, approximately 1 cm in diameter, was surgically produced on the spleen of the pig. The resulting lesion bled freely. A piece of the lyophilized composite material according to the invention was prepared, approximately 2.0 cm x 3.0 cm in size. The piece was applied to the lesion with compression for two minutes. After compression was removed, no bleeding was observed. Three minutes later, some slight re-bleeding occurred in areas not fully contacted with the material. Additional material was applied with compression for one minute. After compression was removed, no further bleeding was observed. The lesion appeared to be sealed with a mixture of clotted blood and the applied composite material.

L119 ANSWER 2 OF 2 WPIX (C) 2003 THOMSON DERWENT
AN **1999-166652** [14] WPIX
CR 1994-135566 [16]; 2001-014859 [66]
DNC **C1999-048579**
TI Preparation of tissue implantable vehicle comprising viable cells - comprises mixing dissolved **chitosan** with viable cells and encapsulating the mixture with a semipermeable membrane.
DC B04 D16 D22
IN AEBISCHER, P; ZIELINSKI, B A
PA (UYBR-N) UNIV BROWN RES FOUND
CYC 1
PI US 5871985 A 19990216 (199914)* 10p C12N011-10
ADT US 5871985 A Cont of US 1992-952249 19920928, CIP of US 1994-176323 19940103, US 1994-294149 19940822
PRAI US 1994-294149 19940822; US 1992-952249 19920928; US 1994-176323 19940103
IC ICM C12N011-10
ICS C12N005-00; C12N011-04
AB US 5871985 A UPAB: 20010110
NOVELTY - The method provides a **non-cross-linked** particulate **chitosan** core matrix for living cell encapsulation. The matrix is placed in thermoplastic jackets, where the formation of the capsule is not dependent upon the presence of the **chitosan** matrix (e.g. through interfacial **cross-linking**) so that the properties of either the jacket or the matrix may be varied without concern for effects on each other. DETAILED DESCRIPTION - The preparation of a tissue implantable vehicle comprising viable cells within a core matrix, comprises: (a) mixing a solution of dissolved **chitosan** with viable cells; (b) encapsulating the mixture within a semipermeable membrane to form a vehicle; and (c) causing the **chitosan** to precipitate to form a **non-cross-linked**, particulate **chitosan** core matrix, while avoiding formation of a **cross-linked** **chitosan** solid or gel. The core does not restrict the viable cells to divide and expand.
USE - The formed capsules are used to transplant cells selected from neurosecretory cells, beta -cell-derived cell lines, fibroblasts, myocytes

```
     and glial cells.
     Dwg.0/2
FS   CPI
FA   AB; DCN
MC   CPI: B04-F01; B12-M11C; D05-A01A


=> fil dpci
FILE 'DPCI' ENTERED AT 12:36:20 ON 03 FEB 2003
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FILE LAST UPDATED: 20 JAN 2003       <20030120/UP>
PATENTS CITATION INDEX, COVERS 1973 TO DATE

>>>  LEARNING FILE LDPCI AVAILABLE  <<<

=> d all tot

L120 ANSWER 1 OF 2  DPCI  (C) 2003 THOMSON DERWENT
AN   2001-169891 [18]   DPCI
DNC  C2001-050996
TI   Biodegradable, skin-compatible, crosslinker-free chitosan preparation,
     useful in cosmetic, medicinal or foodstuff applications, obtained by
     precipitation and dehydration.
DC   B07 D13 D21 P34
IN   HEILEMANN, A; HOLZER, J; SANDER, A; SCHAEFER, G
PA   (COGN-N) COGNIS DEUT GMBH; (COGN-N) COGNIS DEUT GMBH & CO KG
CYC  21
PI   DE 19932075   A1 20010118 (200118)*      10p    C08B037-08    <--
     WO 2001004207 A1 20010118 (200118)  DE          C08L005-08    <--
        RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
         W: JP US
     EP 1198508    A1 20020424 (200235)  DE          C08L005-08    <--
         R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
ADT  DE 19932075 A1 DE 1999-19932075 19990712; WO 2001004207 A1 WO 2000-EP6162
     20000701; EP 1198508 A1 EP 2000-943964 20000701, WO 2000-EP6162 20000701
FDT  EP 1198508 A1 Based on WO 200104207
PRAI DE 1999-19932075 19990712
IC   ICM  C08B037-08; C08L005-08
     ICS  A23L001-056; A23L001-29; A61K007-00; A61K031-722; A61K047-36;
          A61L015-28; A61P017-02
FS   CPI GMPI

EXF  EXAMINER'S FIELD OF SEARCH   UPE: 20010419
-------------------------------

IC   DE 19932075   A1 20010118
     A23L001-9; A61K007-0; A61P017-02; C08B037-08

CTCS CITATION COUNTERS
----------------------
PNC.DI    0              Cited Patents Count (by inventor)
PNC.DX    6              Cited Patents Count (by examiner)
IAC.DI    0              Cited Issuing Authority Count (by inventor)
IAC.DX    4              Cited Issuing Authority Count (by examiner)

PNC.GI    0              Citing Patents Count (by inventor)
PNC.GX    0              Citing Patents Count (by examiner)
IAC.GI    0              Citing Issuing Authority Count (by inventor)
IAC.GX    0              Citing Issuing Authority Count (by examiner)

CRC.I     0              Cited Literature References Count (by inventor)
CRC.X     4              Cited Literature References Count (by examiner)
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CDP CITED PATENTS UPD: 20020206

Cited by Examiner

CITING PATENT	CAT	CITED PATENT	ACCNO
DE 19932075	A1	DE 3903797	A1 1990-248096/33
		PA: (FARH) HOECHST AG	
		IN: DONGES, R; MEISTER, C	
		WO 9620015	A2 1996-280184/29
		PA: (KIMB) KIMBERLY CLARK CORP; (KIMB) KIMBERLY-CLARK WORLDWIDE INC; (KIMB) KIMBERLY-CLARK CORP	
		IN: DUTKIEWICZ, J; NING, X; QIN, J; SUN, T	
WO 200104207	A X	JP 1062302	A 1989-117701/16
		PA: (NIUS) NIPPON SUISAN KAISHA LTD;	
	X	JP 63017901	A 1988-061314/09
		PA: (HGET) HIGETA SHOYU KK	
	X	JP 63090507	A 1988-150559/22
		PA: (NIRA) UNITIKA LTD	
	X	US 4833237	A 1986-043366/07
		PA: (FUJN) FUJI SPINNING CO LTD	
		IN: KAWAMURA, Y; KURAHASHI, I; NAKAJIMA, S; SEO, H; TANIBE, H	

REN LITERATURE CITATIONS UPR: 20020206

Citations by Examiner

CITING PATENT	CAT	CITED LITERATURE
DE 19932075	A1	Journal of Applied Polymer Science, 1987, Bd. 33, Nr. 1, S. 177-189
WO 200104207	A	DATABASE WPI Week 198916 Derwent Publications Ltd., London, GB; AN 1989-117701 XP002151163 "WATER SOLUBLE CHITOSAN SALT USED FOR UePACKING COSMETICS, ETC...-PREPD BY NEUTRALISING ACIDIC AQ. SOLN. OF CHITOSAN WITH CARBONATE" & JP 01 062302 A (NIPPON SUISAN KAISHA LTD), 8. Maerz 1989 (1989-03-08) & PATENT ABSTRACTS OF JAPAN vol. 013, no. 260 (C-607), 15. Juni 1989 (1989-06-15) & JP 01 062302 A (NIPPON SUISAN KAISHA LTD), 8. Maerz 1989 (1989-03-08) & CHEMICAL ABSTRACTS, vol. 111, no. 9, 28. August 1989 (1989-08-28) Columbus, Ohio, US; abstract no. 78544, "MANUFACTURE OF WATER-SOLUBLE CHITOSAN SALTS"
WO 200104207	A	CHEMICAL ABSTRACTS, vol. 111, no. 2, 10. Juli 1989 (1989-07-10) Columbus, Ohio, US; abstract no. 12542, "CHITOSAN SPONGES AS SURGICAL DRESSINGS" XP002151162 & JP 63 090507 A (UNIKITA LTD) 21. April 1988 (1988-04-21)
WO 200104207	A	DATABASE WPI Week 198809 Derwent Publications Ltd., London, GB; AN 1988-061314 XP002151164 "PURIFICN. OF CHITOSAN - BY ADJUSTING PH OF SOLN. CONTG. CHITOSAN, TO ABOUT 6, TO FORM DEPOSIT WHICH IS OPT. WASHED WITH WATER AND DISSOLVED IN ACID" & JP 63 017901 A (HIGETA SHOYU KK), 25. Januar 1988 (1988-01-25) & CHEMICAL ABSTRACTS, vol. 108, no. 22, 30. Mai 1988 (1988-05-30) Columbus, Ohio, US;

abstract no. 188789, "PURIFICATION OF CHITOSAN"

L120 ANSWER 2 OF 2 DPCI (C) 2003 THOMSON DERWENT
AN 2001-160577 [17] DPCI
DNC C2001-048043
TI Biodegradable; skin-compatible, crosslinker-free biopolymer preparation, useful in cosmetic, medicinal or foodstuff applications, obtained by precipitation and dehydration.
DC B07 D13 D21
IN HEILEMANN, A; HOLZER, J; SANDER, A; SCHAEFER, G
PA (COGN-N) COGNIS DEUT GMBH; (COGN-N) COGNIS DEUT GMBH & CO KG
CYC 21
PI DE 19932076 A1 20010118 (200117)* 9p C08B037-00 <--
WO 2001004187 A1 20010118 (200117) DE C08J003-00 <--
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: JP US
EP 1198494 A1 20020424 (200235) DE C08J003-00 <--
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
ADT DE 19932076 A1 DE 1999-19932076 19990712; WO 2001004187 A1 WO 2000-EP6161 20000701; EP 1198494 A1 EP 2000-949239 20000701, WO 2000-EP6161 20000701
FDT EP 1198494 A1 Based on WO 200104187
PRAI DE 1999-19932076 19990712
IC ICM C08B037-00; C08J003-00
ICS A23L001-29; A61K007-00; A61K007-48; C08J005-00
FS CPI

EXF EXAMINER'S FIELD OF SEARCH UPE: 20010411

IC DE 19932076 A1 20010118
A23L001-9; A61K007-0; A61K007-8; C08B037-00

CTCS CITATION COUNTERS

PNC.DI 0 Cited Patents Count (by inventor)
PNC.DX 6 Cited Patents Count (by examiner)
IAC.DI 0 Cited Issuing Authority Count (by inventor)
IAC.DX 3 Cited Issuing Authority Count (by examiner)

PNC.GI 0 Citing Patents Count (by inventor)
PNC.GX 0 Citing Patents Count (by examiner)
IAC.GI 0 Citing Issuing Authority Count (by inventor)
IAC.GX 0 Citing Issuing Authority Count (by examiner)

CRC.I 0 Cited Literature References Count (by inventor)
CRC.X 7 Cited Literature References Count (by examiner)

CDP CITED PATENTS UPD: 20020206

Cited by Examiner

CITING PATENT	CAT	CITED PATENT	ACCNO
DE 19932076	A1	DE 19836960	A1 2000-184038/17
	PA:	(ZIMM-I) ZIMMERMANN U	
	IN:	BEHRINGER, M; ZIMMERMANN, U	
WO 200104187	A X	EP 538904	A 1993-136141/17
	PA:	(KIMB) KIMBERLY CLARK CORP; (KIMB) KIMBERLY-CLARK WORLDWIDE INC	
	IN:	NING, X; SUN, T	
	X	JP 1062302	A 1989-117701/16

PA: (NIUS) NIPPON SUISAN KAISHA LTD
A JP 56104902 A 1981-72788D/40
PA: (KIMI-N) KIMITSU KAGAKU KENKYUSHO
X JP 63017901 A 1988-061314/09
PA: (HGET) HIGETA SHOYU KK
X JP 63090507 A 1988-150559/22
PA: (NIRA) UNITIKA LTD

REN LITERATURE CITATIONS UPR: 20020206

Citations by Examiner

CITING PATENT	CAT	CITED LITERATURE
DE 19932076	A1	ASPINAL, G.O. AEHrsg.Ue: The Polysaccharides. New York Aeu.a.Ue:Academic Press, 1982, Bd. 1, S. 26-31
DE 19932076	A1	WHISTLER, R.L., BEMILLER, J.N., WOLFROM, M.L. AEHrsg.Ue: Methods in Carbohydrate Chemistry. New York Aeu.a.Ue: Academic Press, 1965, Bd. 5, General Polysaccharides, S. 34-46
DE 19932076	A1	Journal of Applied Polymer Science, 1987, Bd. 33, Nr. 1, S. 177-189
WO 200104187	A	DATABASE WPI Week 198809 Derwent Publications Ltd., London, GB; AN 1988-061314 XP002153004 & JP 63 017901 A (HIGETA SHOYU KK), 25. Januar 1988 (1988-01-25) & PATENT ABSTRACTS OF JAPAN vol. 012, no. 223 (C-507), 24. Juni 1988 (1988-06-24) & JP 63 017901 A (HIGETA SHOYU KK), 25. Januar 1988 (1988-01-25) & CHEMICAL ABSTRACTS, vol. 108, no. 22, 30. Mai 1988 (1988-05-30) Columbus, Ohio, US; abstract no. 188789,
WO 200104187	A	CHEMICAL ABSTRACTS, vol. 111, no. 2, 10. Juli 1989 (1989-07-10) Columbus, Ohio, US; abstract no. 12542, "Chitosan sponges as surgical dressings." XP002153003 & JP 63 090507 A (UNITIKA LTD) 21. April 1988 (1988-04-21)
WO 200104187	A	PATENT ABSTRACTS OF JAPAN vol. 013, no. 260 (C-607), 15. Juni 1989 (1989-06-15) & JP 01 062302 A (NIPPON SUISAN KAISHA LTD), 8. Maerz 1989 (1989-03-08) & CHEMICAL ABSTRACTS, vol. 111, no. 9, 28. August 1989 (1989-08-28) Columbus, Ohio, US; abstract no. 78544, "mANUFACTURE OF WATER SOLUBLE CHITOSAN SALTS" & DATABASE WPI Week 198916 Derwent Publications Ltd., London, GB; AN 1989-117701 & JP 01 062302 A (NIPPON SUISAN KAISHA LTD), 8. Maerz 1989 (1989-03-08)
WO 200104187	A	PATENT ABSTRACTS OF JAPAN vol. 005, no. 180 (C-079), 19. November 1981 (1981-11-19) & JP 56 104902 A (KIMITSU KAGAKU KENKYUSHO:KK), 21. August 1981 (1981-08-21)

=> d all abeq tech abex tot

L130 ANSWER 1 OF 8 WPIX (C) 2003 THOMSON DERWENT
AN 2000-184038 [17] WPIX
DNN N2000-135789 DNC C2000-057910
TI Production of high-purity alginate useful for making capsules of encapsulating implants comprises extraction, sedimentation, filtration and precipitation.

DC A11 B07 D13 D22 F06 P34
IN **BEHRINGER, M; ZIMMERMANN, U**
PA (ZIMM-I) ZIMMERMANN U
CYC 22
PI DE 19836960 A1 20000217 (200017)* 6p C08B037-04
WO 2000009566 A1 20000224 (200018) DE C08B037-04
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: CA NZ US
EP 1109837 A1 20010627 (200137) DE C08B037-04
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
ADT DE 19836960 A1 DE 1998-19836960 19980814; WO 2000009566 A1 WO 1999-EP5867 19990812; EP 1109837 A1 EP 1999-941584 19990812, WO 1999-EP5867 19990812
FDT EP 1109837 A1 Based on WO 200009566
PRAI DE 1998-19836960 19980814
IC ICM C08B037-04
ICS A61K009-20; A61K009-48; A61L027-00; C08L005-04
AB DE 19836960 A UPAB: 20000405
NOVELTY - Production of high-purity alginate comprises: (a) extracting algal material or crude alginate with a solution of a complexing agent; (b) sedimenting cell components and particles from the solution with a porous binder, (c) filtering the solution; (d) precipitating alginate from the solution; and (e) collecting the precipitate.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for an alginate composition consisting of a copolymer of mannuronic acid (MA) and guluronic acid (GA) with a MA:GA ratio of 1-90:100 and a molecular weight above 1000 kD.
USE - The product is useful for making capsules or for encapsulating implants, e.g. pancreatic islets.
ADVANTAGE - The process is suitable for large-scale operation and gives products with a higher molecular weight (above 1000 kD) than prior art processes (compare US5429821 and US5656468) and low immunogenicity.
Dwg.0/0
FS CPI GMPI
FA AB; DCN
MC CPI: A03-A; A10-G01B; A12-V02; A12-W05; B04-C02D; B04-F08; B12-M11C; D03-H; D09-C; F03-E
TECH UPTX: 20000405
TECHNOLOGY FOCUS - POLYMERS - Preferred Process: Step (a) comprises extracting fresh algal material (especially brown seaweed) or commercial alginate with a sodium carbonate solution containing ethylenediamine tetraacetic acid (EDTA). The binder comprises porous granules of kieselguhr, cellulose, recycled material or electrographite. The solution is filtered through a series of filters with decreasing pore sizes. The alginate is precipitated with an alcohol, preferably at a concentration of 10-30%. The precipitated alginate is collected by frothing or decantation. The product is dewatered. The extraction, filtration, precipitation and dewatering steps can be repeated.

L130 ANSWER 2 OF 8 WPIX (C) 2003 THOMSON DERWENT
AN 1996-280184 [29] WPIX
DNC C1996-088887
TI Prepn. of chitosan salt of absorptive properties e.g. for diapers - comprises recovery of chitosan salt from mixt. of mono- and multi-basic acid(s), water and water-insoluble chitosan and opt. heat treating.
DC A11 A96 D22 F07
IN DUTKIEWICZ, J; NING, X; QIN, J; SUN, T
PA (KIMB) KIMBERLY CLARK CORP; (KIMB) KIMBERLY-CLARK WORLDWIDE INC; (KIMB) KIMBERLY-CLARK CORP
CYC 67
PI GB 2296250 A 19960626 (199629)* 49p C08B037-08
WO 9620015 A2 19960704 (199632) EN 52p A61L000-00 <--
RW: AT BE CH DE DK ES FR GB GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG

W: AM AT AU BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE KG KP KR KZ LK LR LT LU LV MD MG MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TT UA UG UZ VN

FR	2728575	A1	19960628	(199633)		68p	C08B037-08
ZA	9510740	A	19960828	(199639)		54p	C08B000-00
WO	9620015	A3	19960906	(199645)			C08B037-08 <--
AU	9645167	A	19960719	(199647)			A61L015-60
US	5599916	A	19970204	(199711)		18p	C08B037-08
GB	2296250	B	19970910	(199739)			C08B037-08
EP	799247	A1	19971008	(199745)	EN		C08B037-08
	R: DE FR GB IT						
TW	323286	A	19971221	(199815)			C08B037-08
AU	689692	B	19980402	(199823)			A61L015-60
JP	10511720	W	19981110	(199904)		53p	C08B037-08
KR	98700880	A	19980430	(199914)			A61L015-28
MX	9704660	A1	20000701	(200134)			A61L000-00
EP	799247	B1	20020710	(200253)	EN		C08B037-08
	R: DE FR GB IT						
DE	69527370	E	20020814	(200261)			C08B037-08

ADT GB 2296250 A GB 1995-26240 19951221; WO 9620015 A2 WO 1995-US16191 19951214; FR 2728575 A1 FR 1995-15230 19951221; ZA 9510740 A ZA 1995-10740 19951218; WO 9620015 A3 WO 1995-US16191 19951214; AU 9645167 A AU 1996-45167 19951214; US 5599916 A US 1994-362395 19941222; GB 2296250 B GB 1995-26240 19951221; EP 799247 A1 EP 1995-943779 19951214, WO 1995-US16191 19951214; TW 323286 A TW 1995-113624 19951220; AU 689692 B AU 1996-45167 19951214; JP 10511720 W WO 1995-US16191 19951214, JP 1996-520480 19951214; KR 98700880 A WO 1995-US16191 19951214, KR 1997-704277 19970621; MX 9704660 A1 MX 1997-4660 19970620; EP 799247 B1 EP 1995-943779 19951214, WO 1995-US16191 19951214; DE 69527370 E DE 1995-627370 19951214, EP 1995-943779 19951214, WO 1995-US16191 19951214

FDT AU 9645167 A Based on WO 9620015; EP 799247 A1 Based on WO 9620015; AU 689692 B Previous Publ. AU 9645167, Based on WO 9620015; JP 10511720 W Based on WO 9620015; KR 98700880 A Based on WO 9620015; EP 799247 B1 Based on WO 9620015; DE 69527370 E Based on EP 799247, Based on WO 9620015

PRAI US 1994-362395 19941222

REP No-SR.Pub; 2.Jnl.Ref; EP 627225; JP 01182302

IC ICM A61L000-00; A61L015-60; C08B000-00; C08B037-08
ICS A61F000-00; B01J000-00

ICA A61L015-28; A61L015-42

ICI A61L015-60

AB GB 2296250 A UPAB: 19960724

Prepn. of a water-swellable, water-insoluble chitosan salt (I), having an initial Absorbency under Load (AUL) value 14 g/g, comprises: (i) formation of a mixt. of pH 2-6.5, of (a) water-insoluble chitosan, (b) water and (c) an acid from mono- and multibasic acids of pKa, below 6, all pKan being more than 5.5 and n being an integer more than 1; and (ii) recovery of (I). Opt. (1) after recovery of the water-soluble chitosan salt, treatment under humid conditions or at a temp. and for a period follows to obtain (I); or (2) the recovered chitosan salt comprises an amt. of the original crystalline structure to give (I). Also claimed is (I) described.

USE - (I) is suitable for personal care prods., e.g. diapers, training pants, adult incontinence prods. and feminine care prods..

ADVANTAGE - Natural based (I) has absorptive properties similar to synthetic, highly absorptive materials.

Dwg.1/1

FS CPI

FA AB; GI

MC CPI: A03-A; A09-A08; A12-V03A; D09-C02; D09-C03; D09-C04; D09-C04D; D09-C05; D09-C06; F04-C01; F04-E04

ABEQ US 5599916 A UPAB: 19970313

A process for preparing a water-swellable, water-insoluble chitosan salt, the process comprises:

forming a mixture comprising a water-insoluble chitosan, water, and an add selected from the group consisting of monobasic acids having a pKa1 less than about 6 and multi-basic acids having a pKa1 less than about 6 and all pKan greater than about 5.5, wherein n is an integer greater than 1, wherein the mixture has an equilibrium pH between about 2 and about 6.5, and wherein the mixture is prepared under conditions effective to form a water-soluble chitosan salt, wherein the water-soluble chitosan salt dissolves into the water to form a homogeneous mixture; and

recovering the chitosan salt from the homogeneous mixture, wherein the recovered chitosan salt is water swellable and water insoluble and exhibits an initial Absorbency Under Load value of at least about 14 grams per gram.

Dwg.0/1

ABEQ GB 2296250 B UPAB: 19970926
A water-swellable, water-insoluble chitosan salt wherein the chitosan salt exhibits an initial Absorbency Under Load value of at least about 14 grams per gram.
Dwg.1

L130 ANSWER 3 OF 8 WPIX (C) 2003 THOMSON DERWENT
AN 1993-136141 [17] WPIX
DNN N1993-103817 DNC C1993-060675
TI Water swellable, water insol carboxyalkyl-polysaccharide - having improved absorbency, prepd. by heat treating carboxyalkyl polysaccharide recovered from aq. soln..
DC A11 A96 D22 F07 P34
IN NING, X; SUN, T
PA (KIMB) KIMBERLY CLARK CORP; (KIMB) KIMBERLY-CLARK WORLDWIDE INC
CYC 16

PI	EP 538904	A2	19930428 (199317)*	EN	24p	C08B037-00	<--
	R: BE DE ES FR GB IT NL SE						
	BR 9204036	A	19930504 (199322)			C08B003-00	
	AU 9227291	A	19930429 (199324)			C08B015-04	
	CA 2073292	A	19930426 (199328)			C08B011-20	
	ZA 9207461	A	19930630 (199331)		39p	A41B000-00	
	JP 05214001	A	19930824 (199338)		14p	C08B011-12	
	US 5247072	A	19930921 (199339)		20p	C08B011-12	
	EP 538904	A3	19931013 (199510)			C08B037-00	<--
	AU 658455	B	19950413 (199524)			C08B015-04	
	TW 268899	A	19960121 (199615)			A61L015-28	
	EP 538904	B1	19971217 (199804)	EN	27p	C08B037-00	<--
	R: BE DE ES FR GB IT NL SE						
	DE 69223587	E	19980129 (199810)			C08B037-00	
	ES 2111032	T3	19980301 (199815)			C08B037-00	
	KR 238386	B1	20000115 (200114)			C08B037-02	
	EP 538904	B2	20011010 (200167)	EN		C08B037-00	<--
	R: BE DE ES FR GB IT NL SE						
	JP 3249201	B2	20020121 (200207)		13p	C08B011-12	

ADT EP 538904 A2 EP 1992-118266 19921026; BR 9204036 A BR 1992-4036 19921016; AU 9227291 A AU 1992-27291 19921023; CA 2073292 A CA 1992-2073292 19920707; ZA 9207461 A ZA 1992-7461 19920929; JP 05214001 A JP 1992-287917 19921026; US 5247072 A CIP of US 1991-782853 19911025, Cont of US 1991-808086 19911211, US 1992-952216 19920928; EP 538904 A3 EP 1992-118266 19921026; AU 658455 B AU 1992-27291 19921023; TW 268899 A TW 1992-108274 19921017; EP 538904 B1 EP 1992-118266 19921026; DE 69223587 E DE 1992-623587 19921026, EP 1992-118266 19921026; ES 2111032 T3 EP 1992-118266 19921026; KR 238386 B1 KR 1992-19656 19921024; EP 538904 B2 EP 1992-118266 19921026; JP 3249201 B2 JP 1992-287917 19921026
FDT AU 658455 B Previous Publ. AU 9227291; DE 69223587 E Based on EP 538904; ES 2111032 T3 Based on EP 538904; JP 3249201 B2 Previous Publ. JP 05214001
PRAI US 1991-782853 19911025; US 1991-808086 19911211
REP No-SR.Pub; FR 2510628; GB 1086323; US 3723413; US 3858585; US 4200736
IC ICM A41B000-00; A61L015-28; C08B003-00; C08B011-12; C08B011-20;

C08B015-04; C08B037-00; C08B037-02
ICS A61F000-00; C08B015-10; C08L000-00
ICA A61L015-00
AB EP 538904 A UPAB: 19931116
Producing a water-swellable, water-insoluble carboxyalkyl polysaccharide cpd. comprises forming a soln. comprising a water-soluble carboxyalkyl, polysaccharide having an average deg. of substitution of 0.3-1.5 and water, recovering the carboxyalkyl polysaccharide from the soln., and heat treating the recovered carboxyalkyl polysaccharide at a temp. and for a time to crosslink and render carboxyalkyl polysaccharide and water-insoluble.

Pref. soln. is neutral or basic and comprises 0.01-90 wt.% of the carboxyalkyl polysaccharide which has a deg. of substitution of 0.4-1.2. Polysaccharide is recovered from the soln. by evaporative drying or by pptn., and the polysaccharide is heat-treated at 120-200 deg.C esp. 130-170 deg.C pref. for 1-120 minutes, esp. 5-60 minutes.

USE/ADVANTAGE - Natural-based, highly absorbent material is suitable for use in personal care absorbent prods. e.g. diapers, training pants, adult incontinence prods., feminine care prods.

In an example, 2 wt.% aq. soln. of NaCMC (average deg. of substitution 0.7) was prepd. and the pH adjusted to 7.4 by addn. of NaOH (0.1 H). CMC was recovered by evaporative drying at 80 deg.C, ground into granules and heat-treated at 150 deg.C for 60 minutes. Prod. had an Absorbency Under Load of 24.8 g/g and Free-Swell Capacity of 43.7 g/g.
Dwg.0/0
FS CPI GMPI
FA AB
MC CPI: A03-A04; A03-A05; A10-E08C; D09-C05; D09-C06; F04-C01; F04-E04
ABEQ ZA 9207461 A UPAB: 19931118
Producing a water-swellable, generally water-insoluble, carboxyalkyl polysaccharide having improved absorption properties involves forming a soln. of carboxyalkyl polysaccharide and water, recovering the carboxyalkyl polysaccharide from the soln., and heat-treating the recovered carboxyalkyl polysaccharide. Also, described is a carboxyalkyl polysaccharide having improved absorption properties.
Dwg.0/0
ABEQ US 5247072 A UPAB: 19931123
Prodn. of a water-swellable water-insol. carboxyalkyl polysaccharide comprises (i) forming an aq. soln. of a water-soluble carboxyalkyl polysaccharide having 0.3-1.5 average deg. of substitution, (ii) recovering carboxyalkyl polysaccharide from the soln., and (iii) heating at sufficient temp. to crosslink carboxyalkyl polysaccharide and render it insoluble.

Pref. polysaccharide is cellulose. Deg. of substitution of cellulose is 0.4-1.2. Deg. of acidification of soln. is up to 0.07.

USE/ADVANTAGE - Polysaccharides have ability to absorb liq. while under a load. Esp. useful in e.g. diapers, incontinence prods., feminine hygiene prods. etc.
Dwg.1/10
ABEQ EP 538904 B UPAB: 19980126
Producing a water-swellable, water-insoluble carboxyalkyl polysaccharide cpd. comprises forming a soln. comprising a water-soluble carboxyalkyl, polysaccharide having an average deg. of substitution of 0.3-1.5 and water, recovering the carboxyalkyl polysaccharide from the soln., and heat treating the recovered carboxyalkyl polysaccharide at a temp. and for a time to crosslink and render carboxyalkyl polysaccharide and water-insoluble.

Pref. soln. is neutral or basic and comprises 0.01-90 wt.% of the carboxyalkyl polysaccharide which has a deg. of substitution of 0.4-1.2. Polysaccharide is recovered from the soln. by evaporative drying or by pptn., and the polysaccharide is heat-treated at 120-200 deg.C esp. 130-170 deg.C pref. for 1-120 minutes, esp. 5-60 minutes.

USE/ADVANTAGE - Natural-based, highly absorbent material is suitable

for use in personal care absorbent prods. e.g. diapers, training pants, adult incontinence prods., feminine care prods.

In an example, 2 wt.% aq. soln. of NaCMC (average deg. of substitution 0.7) was prepd. and the pH adjusted to 7.4 by addn. of NaOH (0.1 H). CMC was recovered by evaporative drying at 80 deg.C, ground into granules and heat-treated at 150 deg.C for 60 minutes. Prod. had an Absorbency Under Load of 24.8 g/g and Free-Swell Capacity of 43.7 g/g. Dwg.0/10

L130 ANSWER 4 OF 8 WPIX (C) 2003 THOMSON DERWENT
AN 1990-248096 [33] WPIX
DNC C1990-107105
TI Activating chitosan by treating with acid in suspension medium - which does not dissolve the salt formed, for subsequent derivatisation to cpds. useful e.g. as agricultural fungicides.
DC A11 A35 A97 B04 C03 F06 F09
IN DONGES, R; MEISTER, C
PA (FARH) HOECHST AG
CYC 13
PI EP 382150 A 19900816 (199033)* check
R: BE CH DE ES FR GB IT LI NL
DE 3903797 A 19900816 (199034) <--
NO 9000613 A 19900903 (199041)
CA 2009384 A 19900809 (199043)
JP 02235905 A 19900918 (199043)
EP 382150 B1 19940504 (199418) DE 11p C08B037-08
R: BE CH DE ES FR GB IT LI NL
DE 59005566 G 19940609 (199424) C08B037-08
ES 2054117 T3 19940801 (199432) C08B037-08
US 5442048 A 19950815 (199538) 9p C08B037-08
ADT EP 382150 A EP 1990-102263 19900206; DE 3903797 A DE 1989-3903797 19890209; JP 02235905 A JP 1990-26227 19900207; EP 382150 B1 EP 1990-102263 19900206; DE 59005566 G DE 1990-505566 19900206, EP 1990-102263 19900206; ES 2054117 T3 EP 1990-102263 19900206; US 5442048 A Cont of US 1990-476263 19900207, US 1993-166738 19931214
FDT DE 59005566 G Based on EP 382150; ES 2054117 T3 Based on EP 382150
PRAI DE 1989-3903797 19890209
REP 1.Jnl.Ref; A3...9104; EP 265561; EP 65491; JP 61060701; NoSR.Pub; WO 8707618; 02Jnl.Ref
IC C02F011-12; C08B037-08
ICM C08B037-08
ICS C02F011-12; C07H001-00
AB EP 382150 A UPAB: 19930928
Activation of chitosan (I) comprises addn. of acid to form a salt and pref. subsequent addn. of base. The new feature is that the additions are carried out in a suspension medium which prevents significant dissolution of the chitosan salt.

More specifically the suspension medium is (a) an aq. soln. of inorganic salt, or (b) an organic medium (opt. mixed with water). (I) is used as comminuted material of particle size below 1 (esp. 0.05-0.2) mm, and activation is at 20-150 (pref. 50-70) deg.C for 1-600 (pref. 10-60) min.

USE/ADVANTAGE - The activated material is used for prepn. of water-soluble or -insoluble chitosan derivs. (A) by treatment with cpds. which are known to react with polysaccharides or amines. The resulting derivs. are various useful for sludge dewatering; as cement thickeners; as paper or textile auxiliaries; absorbents; as food and animal feed additives; in prepn. of membranes; in cosmetics; as agricultural fungicides; or in immunology, biochemistry (e.g. for sepn. or immobilisation of enzymes), medical appts. This method of activation is simple, generally applicable, requires only a small reaction volume, and allows prepn. of derivs. contg. strongly hydrophobic or sterically bulky substits.

0/0
FS CPI
FA AB
MC CPI: A10-E09; A12-W11; B04-C02E3; C04-C02E3; F03-B; F03-C; F05-A06C; F05-A06D
ABEQ EP 382150 B UPAB: 19940622
A process for activating chitosan by adding acid for salt formation, followed by adding bases, which comprises carrying out the addition of acid and the addition of bases in an aqueous solution of an inorganic salt which largely prevents the chitosan salts from dissolving.
Dwg.0/0
ABEQ US 5442048 A UPAB: 19950927
Activation of chitosan by addn. of acid for salt formation comprises carrying out acid addn. in a suspending agent comprising a chitosan and an aq. soln. of inorganic salt selected from chloride, nitrate, sulphate, and acetate salts which are readily soluble in water. The aq. salt soln. prevents the chitosan salts from dissolving.
Pref. the chitosan has been comminuted to a particle size of less than 1 (0.05-0.2)mm and activation is carried out over 1-600(10-60) mins. maintaining pH 1-5 (2-3) during acidification and 8-13 (9-11) after addn. of base.
USE - Activated chitosans are used to prepare chitosan derivs. by reaction with polysaccharides or amines comprising organic halogen cpds. selected from organic halogen cpds. selected from alkylhalides, halocarbocyclic acids, etc. alkylene oxides, glycidyl ethers, acid anhydrides, aldehydes, vinyl cpds. or cpds. which can be grafted by means of free radicals in the presence of a free radical initiator.
Dwg.0/0

L130 ANSWER 5 OF 8 WPIX (C) 2003 THOMSON DERWENT
AN 1988-150559 [22] WPIX
DNN N1988-114969 DNC C1988-067120
TI Chitosan sponge, for protecting wounds and stopping bleeding - comprises sponge which is insol. in water or aq. soln. of acetic acid.
DC A11 A96 D22 P34
PA (NIRA) UNITIKA LTD
CYC 1
PI JP 63090507 A 19880421 (198822)* 5p <--
JP 07051603 B2 19950605 (199527) 4p C08B037-08
ADT JP 63090507 A JP 1986-236622 19861003; JP 07051603 B2 JP 1986-236622 19861003
FDT JP 07051603 B2 Based on JP 63090507
PRAI JP 1986-236622 19861003
IC A61L015-01; C08B037-08
ICM C08B037-08
ICS A61L015-01; A61L015-16
AB JP 63090507 A UPAB: 19930923
Chitosan sponge is insol. in water or 2 % aq. soln. of acetic acid and has void content of at least 80 %.
USE/ADVANTAGE - Used for protecting wounds and stopping bleeding. It has high wet strength and dissolving resistance to exuded blood and body fluids and good haemostatic effect.
In an example chitosan powder (of 10 g) is suspended in distilled water (970 ml). Glacial acetic acid (20 ml) is added to the suspension. They are stirred for 2 hr and filtered to obtain a chitosan soln. Na dodecyl alcohol sulphate (of 0.5 g) is added to the chitosan soln. (of 400 g). The mixt. is violently stirred to foam the chitosan soln. and extruded from a cylinder (dia. 1.5 cm) into methanol contg. 4 w/v % of NaOH to coagulate the chitosan soln. in columnar shape. The coagulated prod. is washed with water and methanol, immersed in a mixt. of methanol (of 950 g) and acetic anhydride (of 50 g), stirred at 60 deg.C for 4 hr., washed with methanol and water and freeze-dried to obtain a columnar chitosan sponge. It has void content 96 % and wet strength 2.8 g/mm2. It does not dissolve

in water or in 2 % aq. soln. of acetic acid at 25 deg.C even after being soaked for 6 hr..
0/0
FS CPI GMPI
FA AB
MC CPI: A10-E09; A12-S04; A12-V03A; A12-V03B; A12-V03C1; D09-C04B

L130 ANSWER 6 OF 8 WPIX (C) 2003 THOMSON DERWENT
AN 1988-061314 [09] WPIX
DNC C1988-027675
TI Purificn. of chitosan - by adjusting pH of soln. contg. chitosan, to about 6, to form deposit which is opt. washed with water and dissolved in acid.
DC D17
PA (HGET) HIGETA SHOYU KK
CYC 1
PI JP 63017901 A 19880125 (198809)* 4p <--
ADT JP 63017901 A JP 1986-159793 19860709
PRAI JP 1986-159793 19860709
IC C08B037-08
AB JP 63017901 A UPAB: 19930923
Purifying chitosan comprises adjusting the pH of a soln. contg. chitosan to at least 6.0, pref. 6.5 to form deposit. The deposit is, if necessary, washed with water and dissolved in an acid. The pH of the obtd. soln. is adjusted to at least 6.0, pref. at least 6.5. These procedures of washing, dissolution and deposition are pref. repeated.
ADVANTAGE - Deposition of chitosan is completely effected by only adjusting the pH of a soln. contg. chitosan. The deposit can be sepd. easily by filtration.
0/1
FS CPI
FA AB
MC CPI: D06-H

L130 ANSWER 7 OF 8 WPIX (C) 2003 THOMSON DERWENT
AN 1986-043366 [07] WPIX
DNC C1986-018206
TI Prodn. of porous granular chitosan - by pptn. of low-molecular-wt. chitosan from acid soln. with base.
DC A11 A97 B04 D16 J04
IN KAWAMURA, Y; KURAHASHI, I; NAKAJIMA, S; SEO, H; TANIBE, H
PA (FUJN) FUJI SPINNING CO LTD
CYC 3
PI DE 3527482 A 19860206 (198607)* 42p
JP 61040337 A 19860226 (198615)
JP 61076504 A 19860419 (198622)
DE 3527482 C 19870723 (198729)
JP 63054285 B 19881027 (198847)
JP 01016420 B 19890324 (198916)
US 4833237 A 19890523 (198924) <--
ADT DE 3527482 A DE 1985-3527482 19850731; JP 61040337 A JP 1984-198077 19840921; JP 61076504 A JP 1984-161192 19840731; US 4833237 A US 1987-11150 19870205
PRAI JP 1984-161192 19840731; JP 1984-198077 19840921
IC C07K017-10; C08B037-08; C08G018-64; C08J003-14; C08J009-28; C08L005-08; C12N011-02
AB DE 3527482 A UPAB: 19930922
Prodn. of porous granular chitosan is effected by dissolving low-molecular-wt. chitosan in an aq. acid soln. and pouring the soln. into a basic soln. to coagulate and ppte. the chitosan.
The starting chitosan has a molecular wt. of 10,000-230,000 and its solubility in the aq. acid soln. is 2-20 wt.%. The basic soln. comprises NaOH/H2O, NaOH/EtOH/H2O, ethylenediamine/EtOH, NH3/H2O or NH3/EtOH/H2O.
USE/ADVANTAGE - The prod. is useful as a chromatographic medium and

as a carrier for enzyme immobilisation. The process gives prods. with a uniform particle size and a uniformly fine pore structure without the need for additives (cf. JA 167048/80, 16532/81 and 57401/83).
0/0
FS CPI
FA AB
MC CPI: A10-E09; A11-B06D; A12-L04; A12-W11L; B04-C02E3; B12-M11D; D05-A01A1; D05-A01B; J01-D01A
ABEQ DE 3527482 C UPAB: 19930922
Prepn. of granular, porous chitosan comprises dissolving chitosan (mean Mr 10,000-230,000; 2-20 g) in aq. acid (100 g); pouring the soln. into an aq. alkali, NH3 or ethylenediamine soln., opt. contg. EtOH; and the pptd. chitosan is opt. cross-linked with glucosamine (0.2-2.0 mol/mol) with an organic diisocyanate as cross-linking agent in a polar organic solvent.
USE/ADVANTAGE - The prod. is a chromatographic filler and a support for immobilised enzymes and other active substances.
ABEQ US 4833237 A UPAB: 19930922
Prodn. of granular porous chitosan comprises dissolving a chitosan of mean mol. wt. 10000-230000 in an amt. of 2-20 wt.% into aq. acidic soln. The obtd. intermediate soln. is poured into basic soln. to ppte. porous chitosan having specific surface area 15-98 m2/g.
The porous chitosan can be reacted with organic diisocyanate in an amt. of 0.2-2.0 moles per mole glucosamine residue of the chitosan in polar solvent to provide a prod. having a bed vol. recovery rate of 56-98%.
USE/ADVANTAGE - As a chromatography filler, enzyme carrier, etc. The chitosan has uniform fine pores throughout and uniform particles size. It recovers fine pores when re-immersed in the aq. system after drying treatment.

L130 ANSWER 8 OF 8 WPIX (C) 2003 THOMSON DERWENT
AN 1981-72788D [40] WPIX
TI Water soluble polymeric material prodn. - from brown algae, by crushing, and adding alkali and then acid, used as thickener in printing.
DC A11 G02
PA (KIMI-N) KIMITSU KAGAKU KENKYUSHO
CYC 1
PI JP 56104902 A 19810821 (198140)* 3p <--
PRAI JP 1980-7959 19800126
IC C08B037-04
AB JP 56104902 A UPAB: 19930915
Prodn. comprises crushing brown algae to at least 100 mesh, dissolving the crushed algae in alkali (pH at least 9), adding acid to the soln. to deposit alginic acid or adding salt of at least bivalent metal except Mg to the soln. to ppte water-insoluble metal alginate and produce cpd. consisting of alkali alginate mainly from the ppte.
The alkali alginate prod. is produced without filtration.
In an example Durvillen Potartum was crushed to at least 100 mesh. To 10 kg 200l of water and 2 kg of soda ash were added and stirred at 60 deg.C for 2 hrs. 15l of 2N H2SO4 was added to the soln. The obtd. alginic acid gel contg. cuticle and fibrin was dehydrated, neutralised with 50% NaOH in MeOH and dried to obtain 6.1 kg of prod.
FS CPI
FA AB
MC CPI: A03-A; A10-A; G02-A04A; G05-F

=> d all abeq tech abex

L133 ANSWER 1 OF 1 WPIX (C) 2003 THOMSON DERWENT
AN **1989-117701** [16] WPIX
DNC C1989-052060
TI Water soluble chitosan salt used for packing cosmetics, etc. - prepd. by

neutralising acidic aq. soln. of chitosan with carbonate.
DC A11 D13 D21 F09
PA (NIUS) NIPPON SUISAN KAISHA LTD
CYC 1
PI JP 01062302 A 19890308 (198916)* 3p
JP 02032281 B 19900719 (199033)
ADT JP 01062302 A JP 1987-218312 19870901; JP 02032281 B JP 1987-218312 19870901
PRAI JP 1987-218312 19870901
IC C08B037-08
AB JP 01062302 A UPAB: 19930923
Chitosan salt, which is water soluble at pH 6-8 is prepd. by neutralising an acidic aq. soln. of chitosan with carbonate.
Specifically, the acidic aq. soln. of chitosan is obtd. by adding organic salt (e.g. formic acid, acetic acid, lactic acid, sulphamic acid, etc., or inorganic acid hydrochloric acid, nitric acid, etc., to chitosan and dissolving the mixt. in water. The carbonate used is ammonium (bi)carbonate, Na (bi)carboante, K, (b)carbonate, Ca carbonate, etc. The neutralised aq. soln. is dried by freezing to form powder, which is dissolved in water before use.
USE/ADVANTAGE - The chitosan salt can be added as a thickener and bacteriastatic agent for the prepn. of a frying mixt., as a thickener and humidifier of packing agent in cosmetics and as a gloss agent and reinforcing agent for paper, because it does not coagulate protein.
0/0
FS CPI
FA AB
MC CPI: A10-E; A10-E09; A12-P; A12-V04; D08-B01; F05-A06C

=> d his

(FILE 'HOME' ENTERED AT 09:55:19 ON 03 FEB 2003)
SET COST OFF

FILE 'REGISTRY' ENTERED AT 09:56:08 ON 03 FEB 2003
E CHITOSAN/CN
L1 1 S E3

FILE 'HCAPLUS' ENTERED AT 09:57:12 ON 03 FEB 2003
L2 10895 S L1
L3 13648 S CHITOSAN
L4 13758 S L2,L3
E HEILEMANN A/AU
L5 12 S E4,E5
E HOLZER J/AU
L6 58 S E3-E5,E9-E11
E SANDER A/AU
L7 135 S E3-E7,E15
E SCHAEFER G/AU
L8 233 S E3-E12,E36
E COGNIS/PA,CS
L9 800 S E3-E112
E SCHAFER G/AU
L10 100 S E3-E7,E21
L11 2 S L4 AND L5-L8,L10
L12 1 S L9 AND L11
L13 2 S L11,L12
E CROSSLINK/CT
L14 48186 S E15
E E15+ALL
L15 244 S L4 AND L14
L16 1605 S L4 AND (?CROSSLINK? OR ?CROSS LINK?)

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L17           2 S L13 AND L14-L16
L18          54 S L9 AND L4
L19           3 S L18 AND L14-L16
L20           2 S L19 NOT PVP
L21           3 S L17,L20
L22        1605 S L15,L16
L23          23 S L22 AND (NONCROSSLINK? OR NONCROSS LINK? OR NON()(CROSSLINK?
L24          45 S L22 AND FREE(S)(?CROSSLINK? OR ?CROSS LINK?)
L25          65 S L23,L24

     FILE 'REGISTRY' ENTERED AT 11:23:16 ON 03 FEB 2003
L26           1 S 7664-41-7
L27           1 S 144-55-8
L28           6 S 463-79-6/CRN AND NA/ELS AND 2/NC NOT ((MXS OR MNS OR IDS)/CI

     FILE 'HCAPLUS' ENTERED AT 11:25:03 ON 03 FEB 2003
L29      108913 S L26
L30      328540 S AMMONIA OR NH3
L31       44376 S L27 OR L28
L32       89950 S (NA OR SODIUM OR MONOSODIUM)()(CARBONATE OR HYDROGEN CARBONAT
L33          34 S L22 AND L29-L32
                E ALKALI METAL/CT
                E ALKALI METAL HYDROXIDE/CT
                E E4+ALL
L34       85739 S E10,E9+NT
                E ALKALINE EARTH/CT
                E ALKALINE EARTH METAL/CT
                E ALKALINE EARTH HYDROXIDE/CT
                E E4+ALL
L35       46877 S E9+NT
                E E8+ALL
L36        3557 S E5,E4
L37      502019 S CSOH OR LIOH OR KOH OR NAOH OR BAOH OR CAOH OR MGOH OR SROH O
L38      125564 S (CESIUM OR LITHIUM OR POTASSIUM OR SODIUM OR BARIUM OR CALCIU
L39         135 S L22 AND L34-L38
L40         161 S L33,L39
                E BAESCT
                E BAES/CT
                E BASES/CT
L41           4 S L22 AND E3-E7,E13-E24
                E E3+ALL
L42           4 S L22 AND E2,E1+NT
                E CARBONATES/CT
L43           5 S L22 AND E3-E22
                E E3+ALL
L44          41 S L22 AND E4+NT
                E PHOSPHATES/CT
L45          11 S L22 AND E3-E45
                E E3+ALL
L46          72 S L22 AND E4+NT
L47         224 S L40-L46
L48           8 S L47 AND L25
L49          57 S L25 NOT L48
L50          45 S L49 AND (PD<=20000701 OR PRD<=20000701 OR AD<=20000701)
L51          16 S L50 AND CARBOHYDRAT?/SC,SX,CW
L52          29 S L50 NOT L51
L53          16 S L52 AND CHITOSAN/TI
                SEL DN AN 5 8 12 13 15
L54           5 S L53 AND E1-E15
                SEL L48 DN AN 4 5 8
L55           5 S L48 NOT E16-E24
L56          10 S L54,L55
L57          13 S L52 NOT L53-L56
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                SEL DN AN 3 10
L58           2 S E24-E30 AND L57
L59          12 S L56,L58
L60          12 S L49 NOT L50-L59
L61         847 S L1 (L) TEM/RL
L62         130 S L61 AND L22
L63           4 S L61 AND L25
L64           3 S L63 NOT MECHANICAL/TI
L65          16 S L59,L64,L21 AND L2-L25,L29-L64
L66          53 S L22 AND FREEZ?(L)(DRY OR DRIED OR DRIES OR DRYING)
L67          14 S L66 AND L47
L68           4 S L66 AND L25
L69           2 S L67,L68 AND L65
L70          15 S L67,L68 NOT L69
L71          16 S L65,L69
L72         249 S L22 AND (DRYING OR DRY OR DRIED OR DRIES)
L73          54 S L72 AND (FROZ? OR FREEZ?)
L74           1 S L73 NOT L66-L71
L75          98 S L22 AND WITHOUT
L76          63 S L75 AND CHITOSAN/TI
L77          35 S L75 NOT L76
                SEL DN AN 15
L78           1 S L77 AND E31-E33
L79          17 S L71,L78 AND L2-L25,L29-L78

     FILE 'HCAPLUS' ENTERED AT 12:06:16 ON 03 FEB 2003

     FILE 'WPIX' ENTERED AT 12:06:56 ON 03 FEB 2003
L80        4655 S CHITOSAN
L81        2527 S R03882/DCN,PLE
L82        1696 S (C08B037-08 OR C08L005-08 OR A61K031-722 OR A23L001-056)/IC,I
L83        1514 S (B04-C02E3 OR C04-C02E3)/MC
L84        4726 S L80/BIX
L85        6214 S L80-L84
L86         679 S L85 AND (?CROSSLINK? OR ?CROSS LINK?)/BIX
L87          12 S L85 AND B5027/PLE
L88           9 S L86 AND L87
L89          12 S L87,L88
                SEL DN AN 4 9 10
L90           3 S L89 AND E34-E40
                E HEILEMANN A/AU
L91           8 S E3
                E HOLZER J/AU
L92          38 S E3,E4
                E SANDER A/AU
L93          63 S E3-E5
                E SCHAEFER G/AU
L94         193 S E3-E11
                E SCHAFER G/AU
L95         108 S E3-E7
L96           3 S L85 AND L91-L95
L97           3 S L96 AND L86-L89
                E COGNIS/PA
L98         987 S E3-E19
                E COGN/PACO
L99        1322 S E3-E5
L100         85 S L98,L99 AND L85
L101          5 S L100 AND L86-L89
L102          6 S L97,L101
                SEL DN AN 2 3
                SEL DN AN 3 4
L103          2 S E5-E8
L104          5 S L90,L103 AND L80-L103
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                E R07813+ALL/DCN
L105          667 S E1
L106         6216 S L105,L85
L107            2 S L106 NOT L85
L108           13 S L106 AND (NONCROSSLINK? OR NON CROSSLINK? OR NON CROSS LINK?)
L109           42 S L106 AND (?CROSSLINK? OR ?CROSS LINK?)(S)FREE
L110           52 S L108,L109
L111            4 S L110 AND L104
L112            5 S L104,L111
L113           42 S L110 NOT L89,L101-L104,L107,L112
                SEL DN AN 15 31
L114            2 S L113 AND E1-E4
L115            7 S L112,L114 AND L80-L114

     FILE 'WPIX' ENTERED AT 12:31:30 ON 03 FEB 2003
L116            9 S L108 NOT L115
                SEL DN AN 2 6
L117            2 S E5-E8
L118            9 S L115,L117 AND L80-L114
L119            2 S L118 NOT L115
                SEL PN L103

     FILE 'DPCI' ENTERED AT 12:36:11 ON 03 FEB 2003
L120            2 S E9-E14

     FILE 'DPCI' ENTERED AT 12:36:20 ON 03 FEB 2003

     FILE 'WPIX' ENTERED AT 12:36:50 ON 03 FEB 2003
L121            4 S (DE3903707 OR WO9620015 OR JP1062302 OR JP63017901 OR JP63090
                E DONGES /AU
L122           15 S E8
L123            1 S DE3903797/PN
                E JP63017901/PN
L124            1 S E3
                E DE2000-19836960/AP,PRN
                E DE19836860/PN
                E ZIMMERMANN U/AU
L125           89 S E3
L126            0 S L125 AND L106
                E BEHRINGER M/AU
L127            1 S E3-E5 AND L125
L128            2 S (EP538904 OR JP56104902)/PN
L129            8 S L121,L123,L124,L127,L128
L130            8 S L129 NOT L115,L119
                E 1989-117701/AN
L131            1 S E3
                E 1988-061314/AN
L132            1 S E3
L133            1 S L131,L132 NOT L115,L119,L130
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